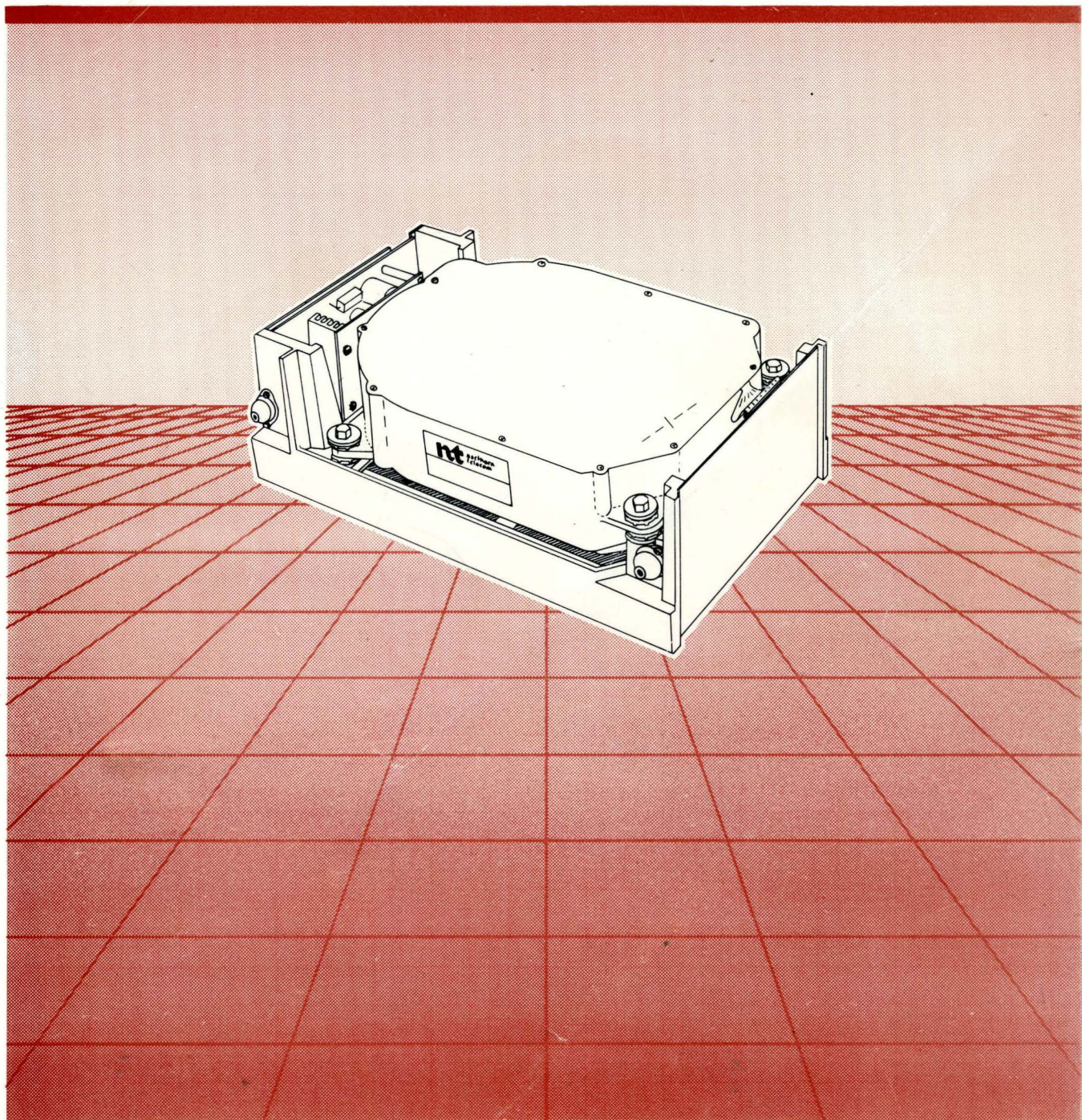




MERCURY
8300/8400/8500 SERIES

INSTALLATION GUIDE



MSD Document No. IG 83-5/E

**MERCURY 8300/8400/8500 SERIES
8-INCH SMD WINCHESTER
DISK DRIVE**

INSTALLATION GUIDE

**NORTHERN TELECOM INC.
MEMORY SYSTEMS DIVISION
ANN ARBOR, MICHIGAN**

KD

REVISION HISTORY

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This manual was produced by Memory Systems Division, Technical Communication Department.

PREFACE

The Mercury Disk Drive Series is a family of high-capacity, high-reliability Winchester 8-inch disk drives. The Mercury 8300/8400/8500 drives feature the ANSI-standard SMD Interface which has been modified to allow a 1.895 MB/second (8300), 2.52 MB/second (8400) or 3.0 MB/second (8500) transfer rate.

This guide contains step-by-step instructions for installing the Mercury Series 8300/8400/8500 Disk Drive. For a more detailed description of the disk operation refer to the *Mercury Product Specification, Document No. 460000 (8300), No. 480000 (8400) or No. 490000 (8500)*.

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INTRODUCTION

This guide describes step-by-step procedures for installing the Mercury Series 8300/8400/8500 8-inch Winchester SMD Disk Drive.

The Mercury Disk Drive is shown in **Figure 1**.

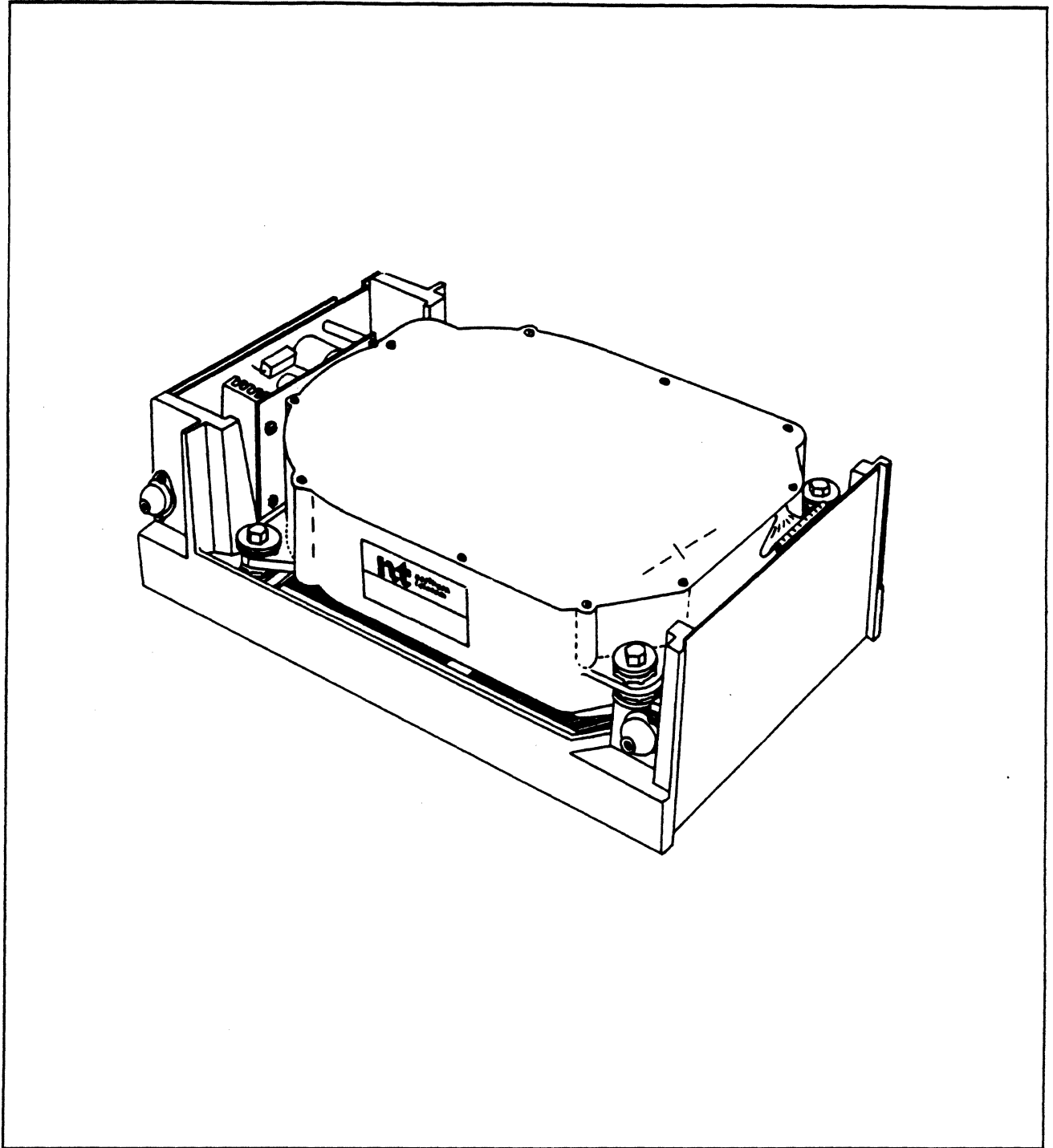


Figure 1
Mercury Series 8300/8400 Disk Drive

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UNPACKING

To remove the Mercury Disk Drive and options from the shipping carton see **Figures 2 through 2D** and follow these steps.

NOTE

Save all packaging materials to repack the drive in case you need to ship it for service.

- (a) If enclosed, remove the documentation packet.
- (b) The optional SMD Terminator Board box or Evaluation Unit Feet bag may be included in your shipment. If so, take out the option package from the carton and set it in a safe place.
- (c) The foam padded box remaining in the shipping carton contains the disk drive. See **Figure 2**.

Reach under each protective end cap and lift the drive box from the shipping carton.

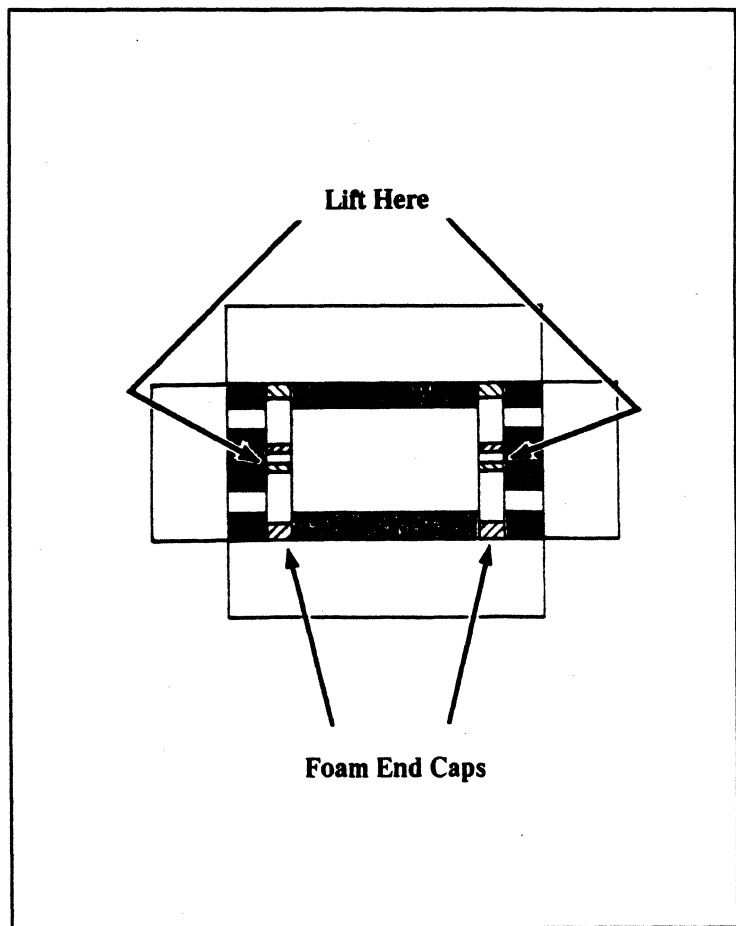


Figure 2
Removing the Disk Drive Box

- (d) Set the drive on a stable, flat surface.
See **Figure 2A**.

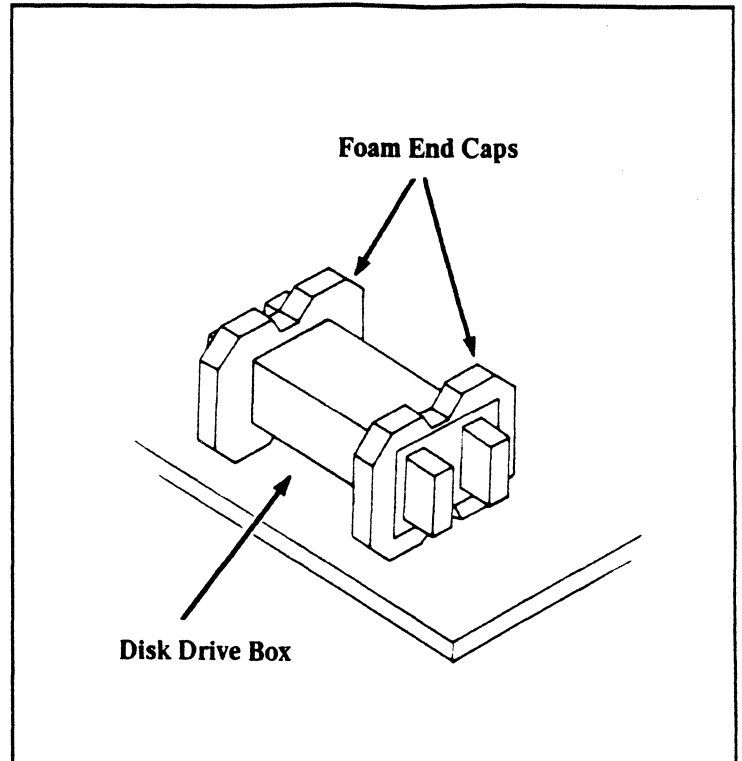


Figure 2A
Disk Drive Box and End Caps

- (e) Support the drive box while removing each of the end caps. Do not let the drive box drop to the bench surface. See **Figures 2B** and **2C**.

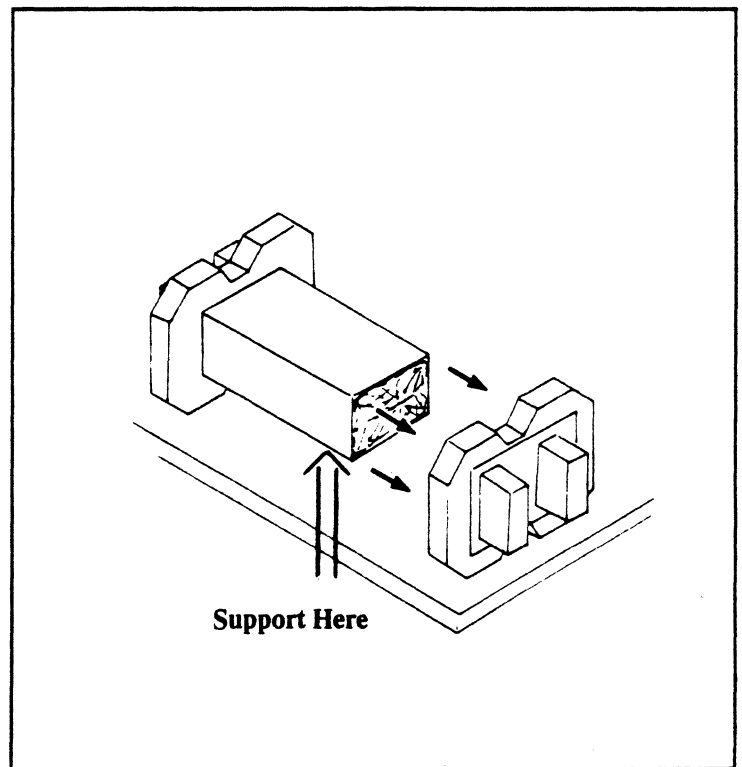


Figure 2B
Removing the End Caps

CAUTION

Do not cut the drive box to remove the disk drive. Cutting the box may damage the PC Boards or Cables.

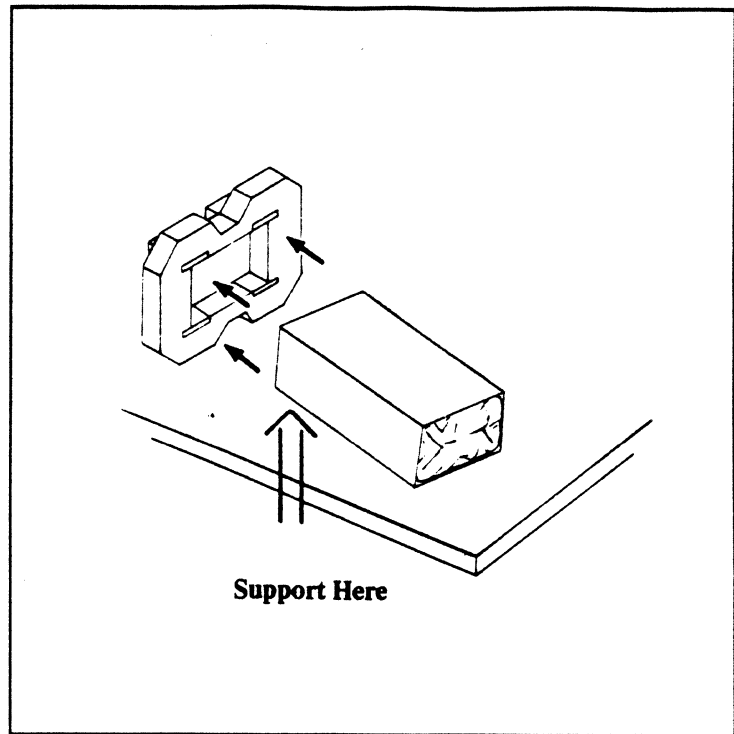


Figure 2C
Removing the End Caps

- (f) **CAREFULLY** stand the disk drive box on end. Steadily slide the drive box off the drive--do not jar or bounce the disk drive against the bench. See **Figure 2D**.
- (g) Remove the disk drive from the black anti-static bag.

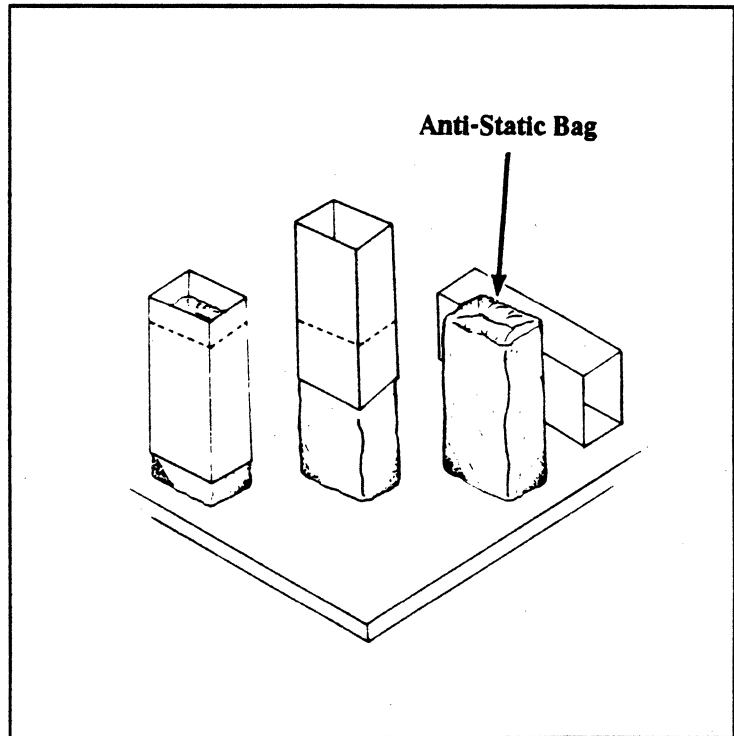


Figure 2D
Removing the Disk Drive Box

Repacking the Drive

To repack the drive for shipping see **Figure 2E** and follow the unpacking procedures in reverse order.

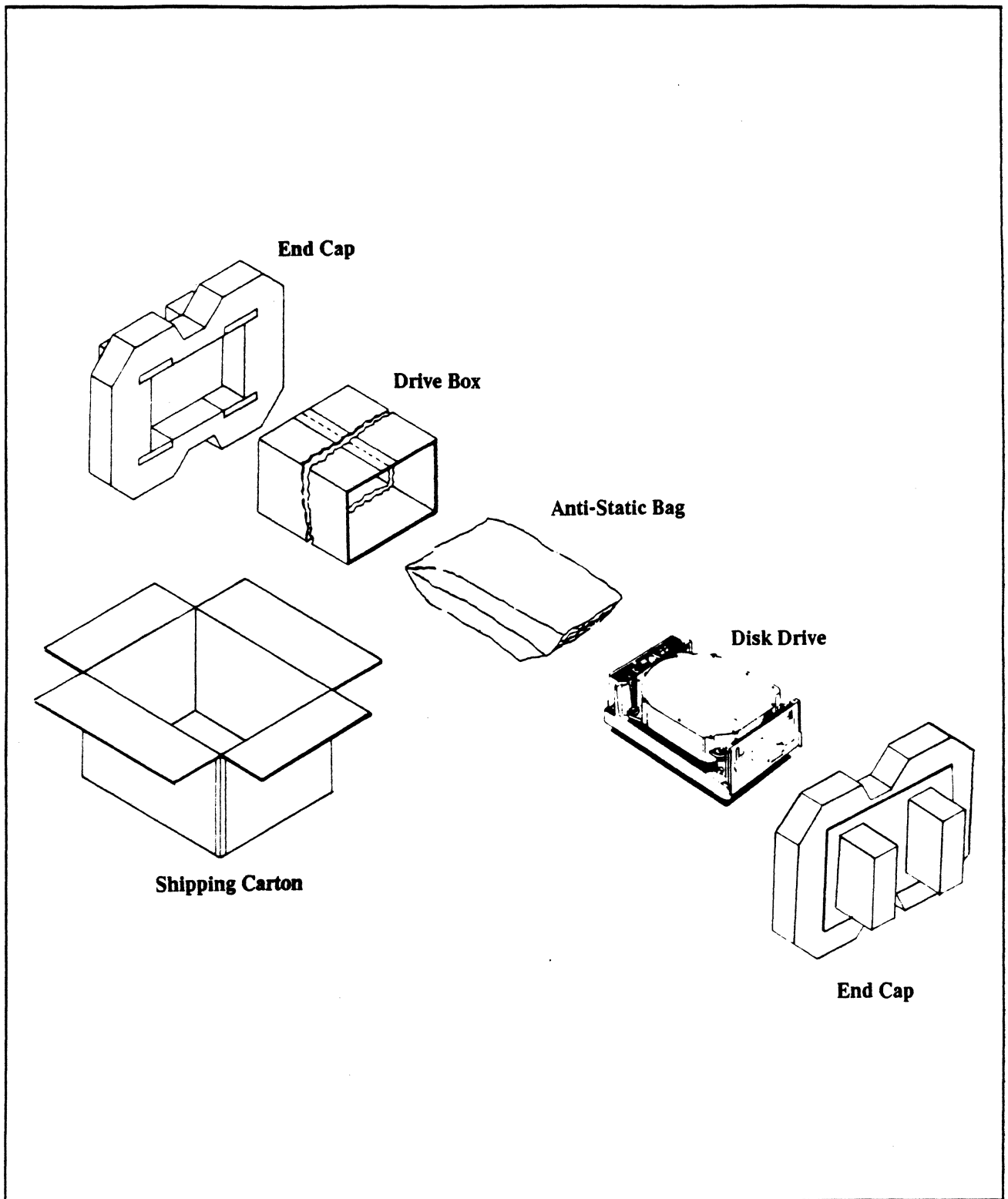


Figure 2E
Repacking the Mercury Disk Drive

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Figure 3 shows some of the important locations on the drive referred to in the installation procedures: shock mounts for mounting the drive, PC boards, cabling ports, and the grounding point. More detailed illustrations and descriptions of these locations will follow.

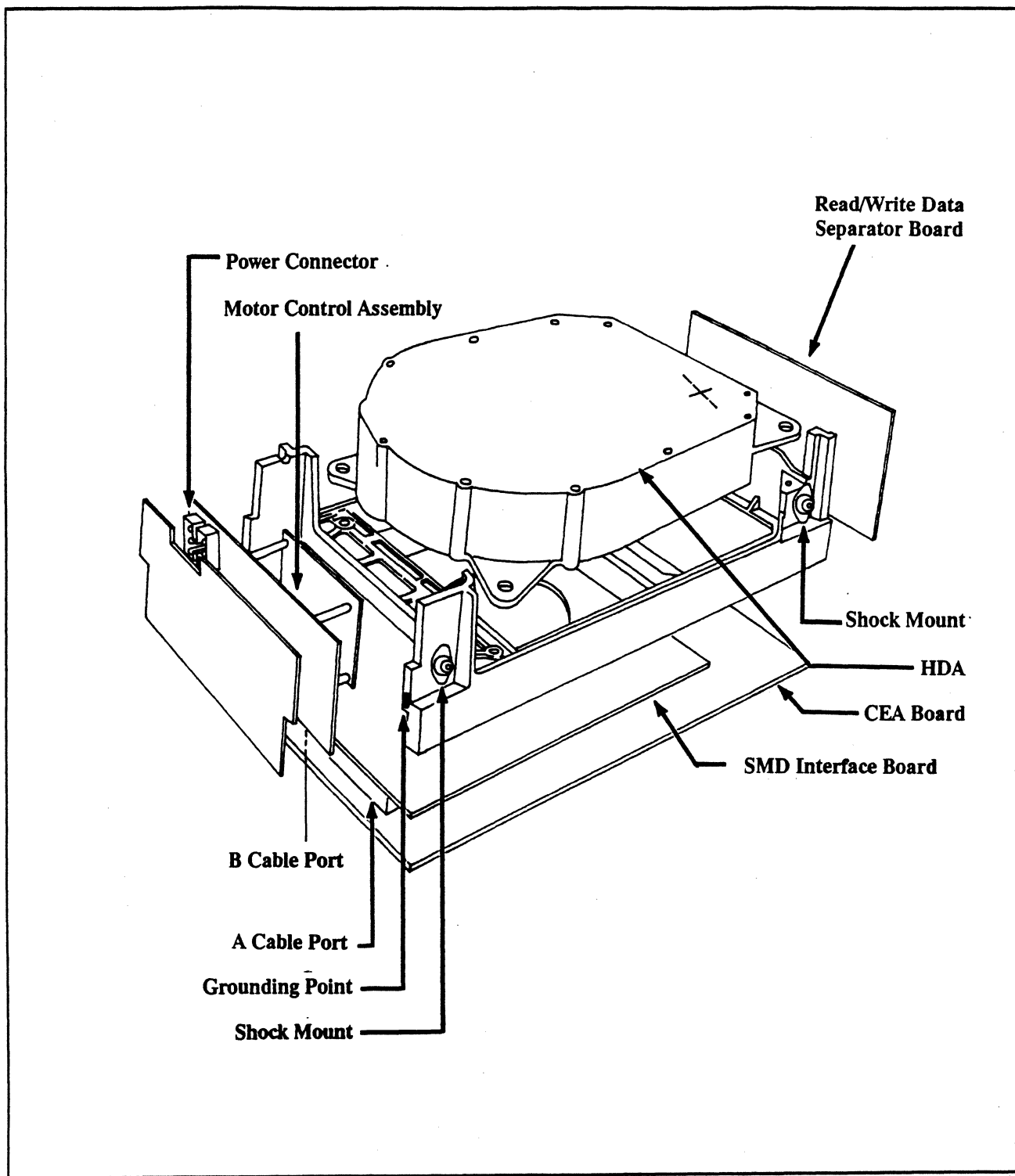


Figure 3
Mercury Disk Drive
Exploded View

USER VARIABLE SWITCH SETTINGS

Use **Tables 1 through 4** to set the user variable switches on the drive. Refer to **Figure 4** for switch locations. Also refer to **Figure 5** for an optional address jumper.

CAUTION

To prevent data loss, do not change any switch settings while the drive is operating. Power down the drive before setting or resetting any switches.

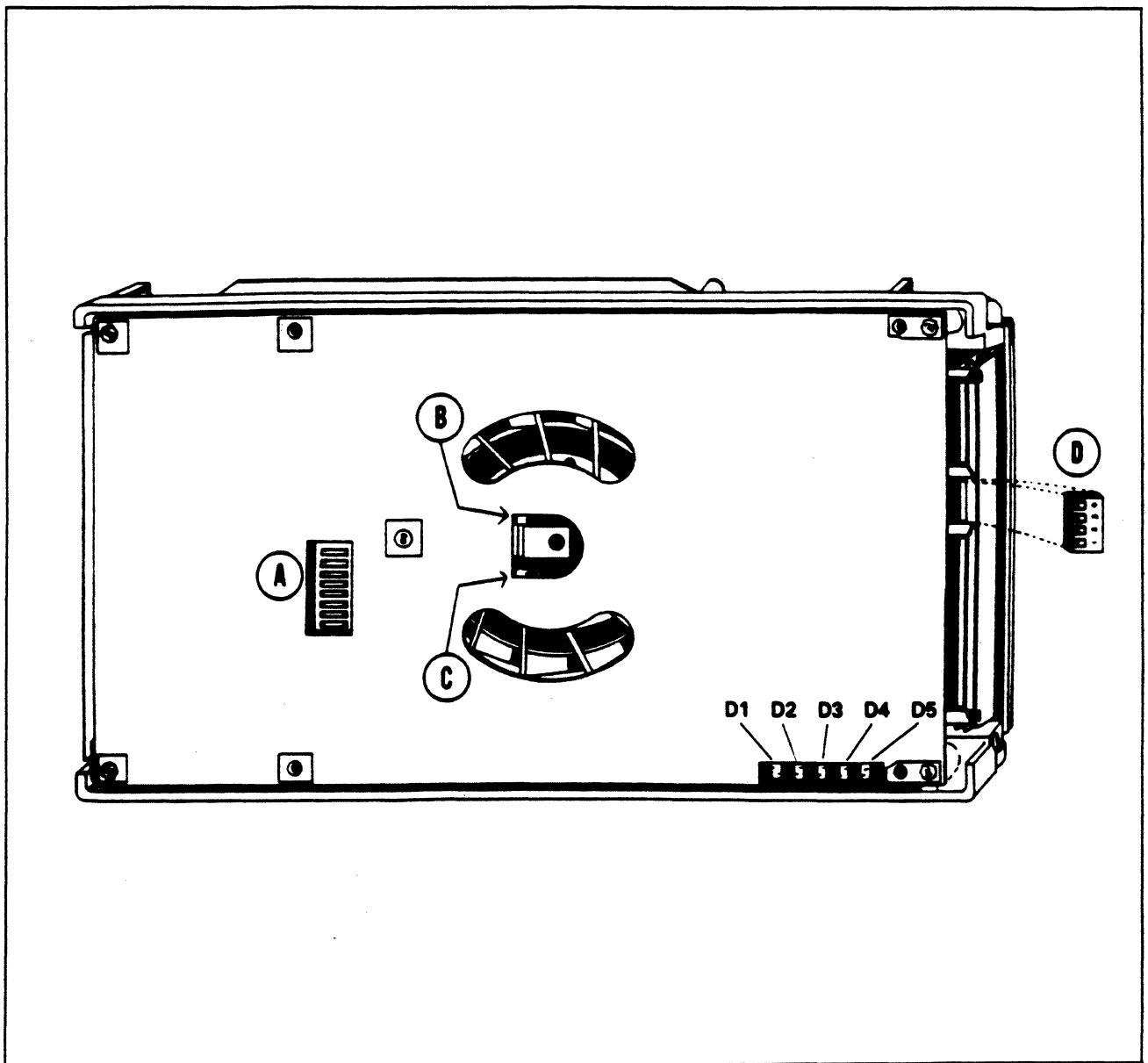


Figure 4
Mercury Disk Drive User Variable
Switch Locations

Table 1
Switch Block IC55, SMD Interface Board

A

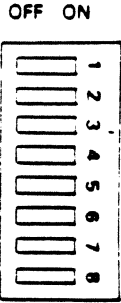
	Switch	Label	Function	Switch Setting	
	1	WRPROT	Set to enable write protect.	Drive write protected.	Drive not write protected.
	2	SECTLO	Set to select Sector Pulse location.	Pulse at beginning of customer sector.	Pulse 14 bytes customer sector.
	3 4 5 6	SELB0 SELB1 SELB2 SELB3	Set to select binary-encoded drive address (0 to 15). See Table 1A.	1	0
	7 8	---- ----	Not operational; reserved for future use.		

Table 1A
Binary Encoded Drive Address

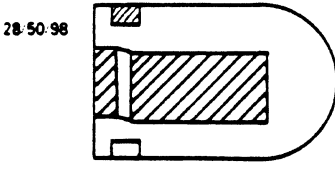
Address	Switch Setting			
	6 (SELB3)	5 (SELB2)	4 (SELB1)	3 (SELB0)
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

0=Off

1=On

Table 2
Switch S2, CEA Board, 8300

B

 SECTOR SIZE S2 24 48 96 28-50-98	Function	Switch Setting	
		24/48/96	28/50/98
	Set slide switch to select number of sectors per track. (8300 only)*	24 sectors per track on a 1024 byte/sector drive; 48 sectors per track on a 512 byte/sector drive; 96 sectors per track on a 256 byte/sector drive.	28 sectors per track on a 1024 byte/sector drive; 50 sectors per track on a 512 byte/sector drive; 98 sectors per track on a 256 byte/sector drive.

This switch is non-operational on the 8400 and 8500.

Table 3
Switch S1, CEA Board

C

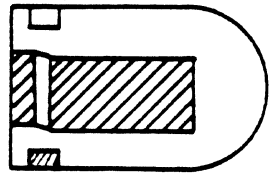
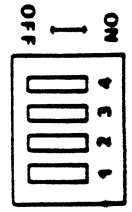
 NO YES SECTOR PULSE DURING INDEX SECTOR S1	Function	Switch Setting	
		YES	NO
	Set slide switch to choose between enabling or disabling a SECTOR signal simultaneous with the INDEX signal.	Enables SECTOR signal simultaneous with the INDEX signal.	Disables SECTOR signal output with the INDEX signal.

Table 4
Switch Block S1, SMD Interface Board

D

	Switch	Label	Function	Switch Setting	
				On	Off
	1	LO/REM	Set to select Local or Remote power-up mode.	Local: disk can power up without <i>PICK</i> signal from host.	Remote: drive requires <i>PICK</i> signal from host to power up.
	2	1024	Set to activate or deactivate 11th address bit.	Restricts addressing to cylinder 1023. Set when <i>Bit 10</i> is not driven.	Enables addressing beyond cylinder 1023. <i>Bit 10</i> signal must be driven if selected.
	3	HDSW CON	Set to select headswitch convention (mode).	Head switch requires <i>TAG 2</i> signal (head #) followed by <i>TAG 1</i> (cylinder address) signal.	Head switch requires only a <i>TAG 2</i> (head #) signal.
	4	CLKOPT	<i>Servo Clock</i> signal through <i>Read Clock</i> line when not reading.	Enabled.	Disabled.

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SMD-E Addressing Option

The Mercury 8300/8400/8500 drives are configured with an option to select either SMD-O or SMD-E addressing convention. The 8300 drive uses jumpers E6 and E7 and the 8400 and 8500 drives use jumpers E20 and E21. SMD-O addressing sends the 11th address bit (for addressing beyond cylinder 1024) as Bit 10 with a TAG1. SMD-E addressing sends the 11th address bit as Bit 7 with a TAG2. (Bit 8 and 9 are also sent for cylinder addresses beyond 2048.)

Without the jumper on the CEA Board (see Figure 5) SMD-O is enabled. With the jumper on the CEA board, SMD-E addressing is enabled. **IMPORTANT:** If SMD-E addressing is enabled, the 11th address bit inhibit switch must be on.

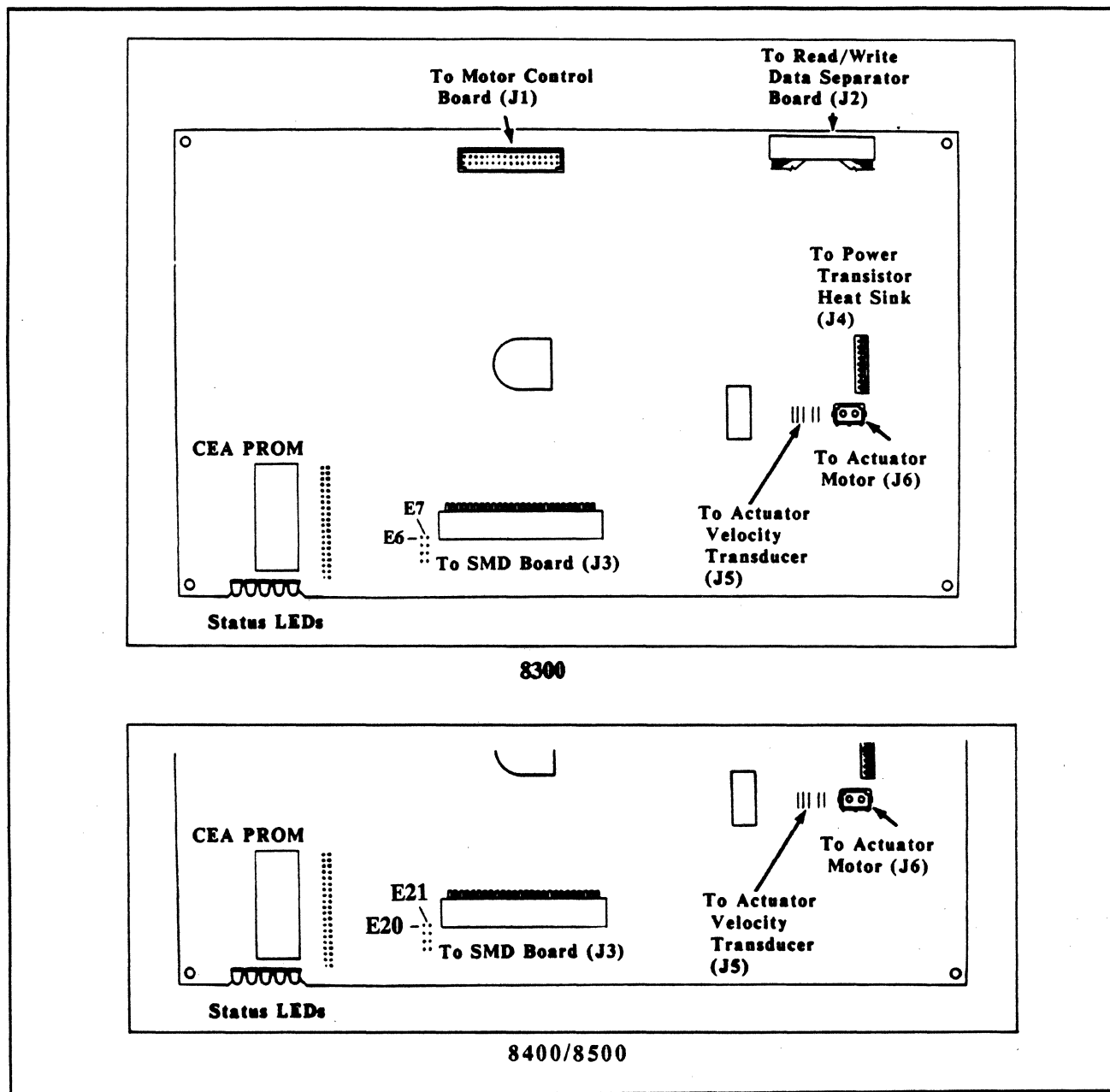


Figure 5
SMD-E Addressing Jumper

CABLING

Single or multiple (up to 16) Mercury Drives may be connected to a host controller. **Figure 5** shows cabling configurations for connecting multiple Mercury Disk Drives to a host controller.

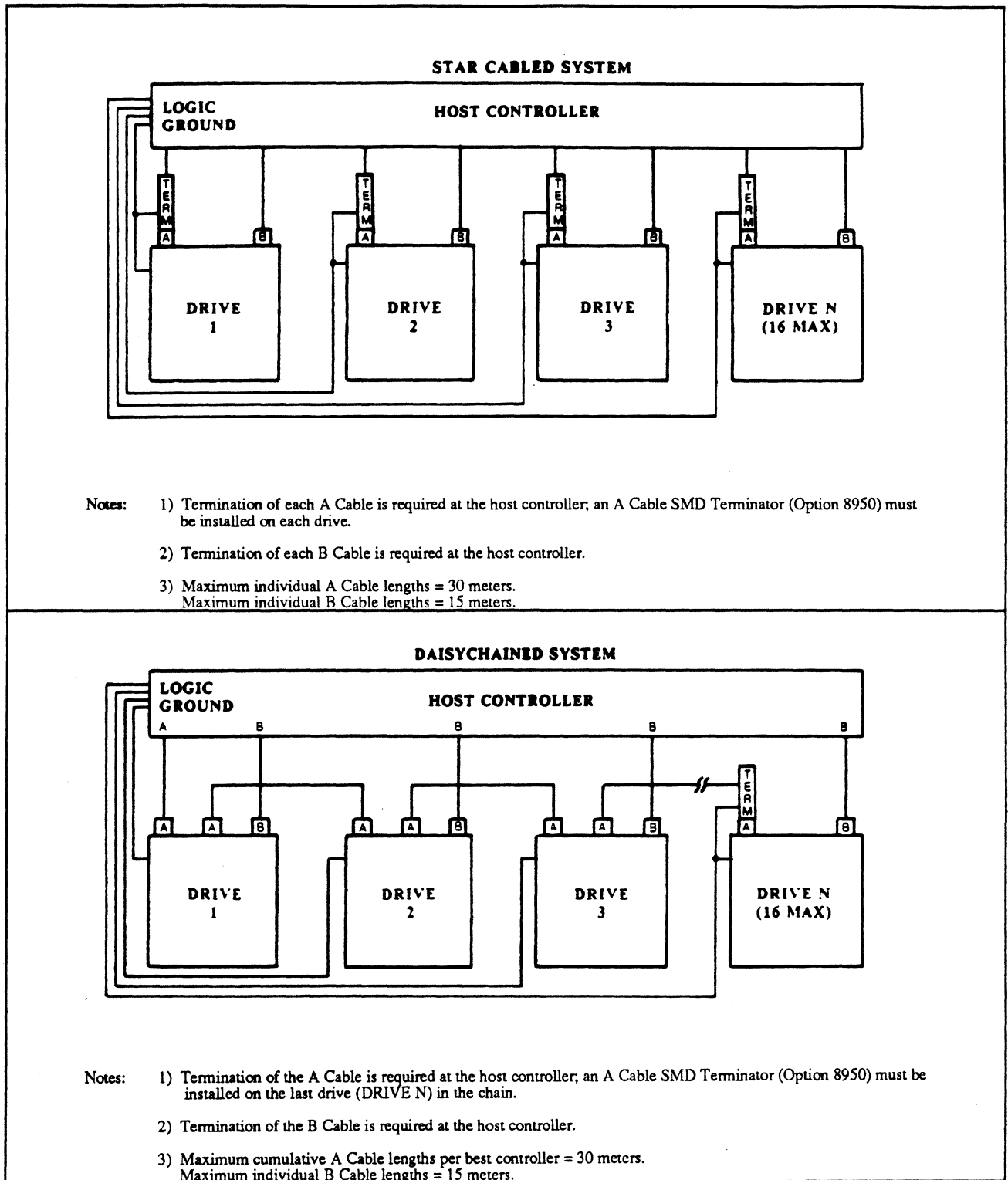


Figure 6
Cabling Configurations

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Connections

The Mercury Disk Drive cabling connections consist of the following:

- Grounding
- Power Cable
- SMD Terminator (on all drives, each drive in a radial configuration and the last drive in a daisy chain configuration)
- A Cable (SMD Interface Control Cable)
- B Cable (SMD Interface Read/Write Cable)

Grounding

A threaded hole is provided on the drive frame for SMD Terminator Board Grounding and system integrator use. This ground point is connected to logic ground and is isolated from the shock mounts.

A grounding cable can be fastened to the drive frame with the 0.5-inch, 8-32 screw provided at the end of the drive. The screw has a star washer permanently attached. See **Figure 7** for the grounding screw location.

Grounding Cable assemblies are available in lengths of 2, 4, 6, 10, 20, 30, 40 or 50 feet. Order Model No. 8982-XX (XX specifies the cable length).

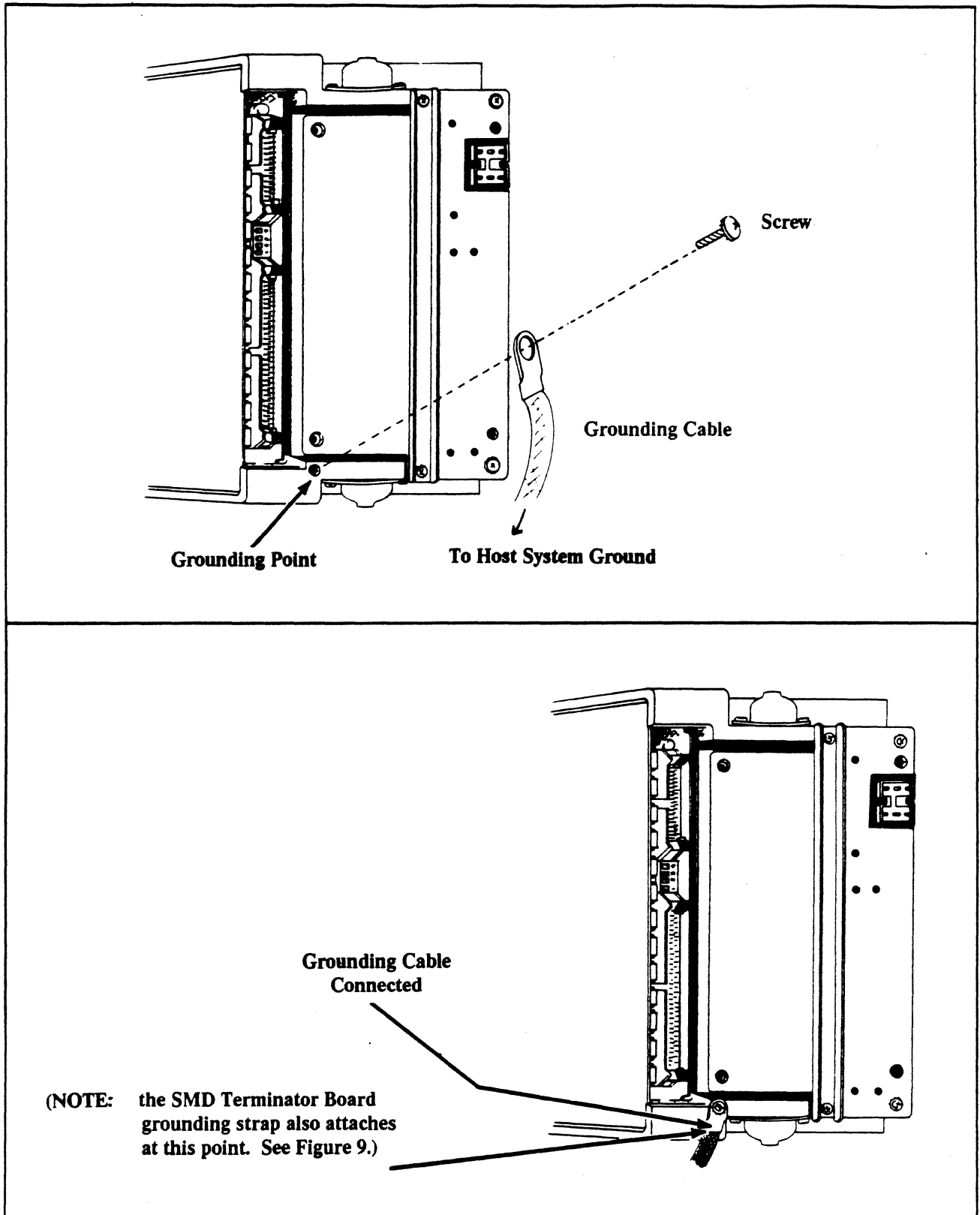


Figure 7
Connecting the Grounding Cable

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Input Power Connection

The disk drive requires + 5 and + 24 VDC from an external power source. It is suggested that the user-supplied power source have the characteristics listed in **Table 5**.

Table 5
Mercury Disk Drive
Recommended Power Supply Capability

Voltage (VDC)	Maximum Ripple (mV, p/p)	Current (Amps, peak)
+24 (+/- 10%)	240	8.0
+5 (+/- 5%)	50	3.5

Refer to the *MSD Mercury Product Specifications* for more detailed information on power requirements.

Input power is applied to connector J6 on the drive's Motor Control Board. Connector J6 is an AMP #1-380999-0. Use mating connector AMP #1-480270-0 with female AMP #60619-4 contacts on 14 AWG super-flex stranded wire for connecting power to the drive. See **Figure 8** for connector locations and pin assignments.

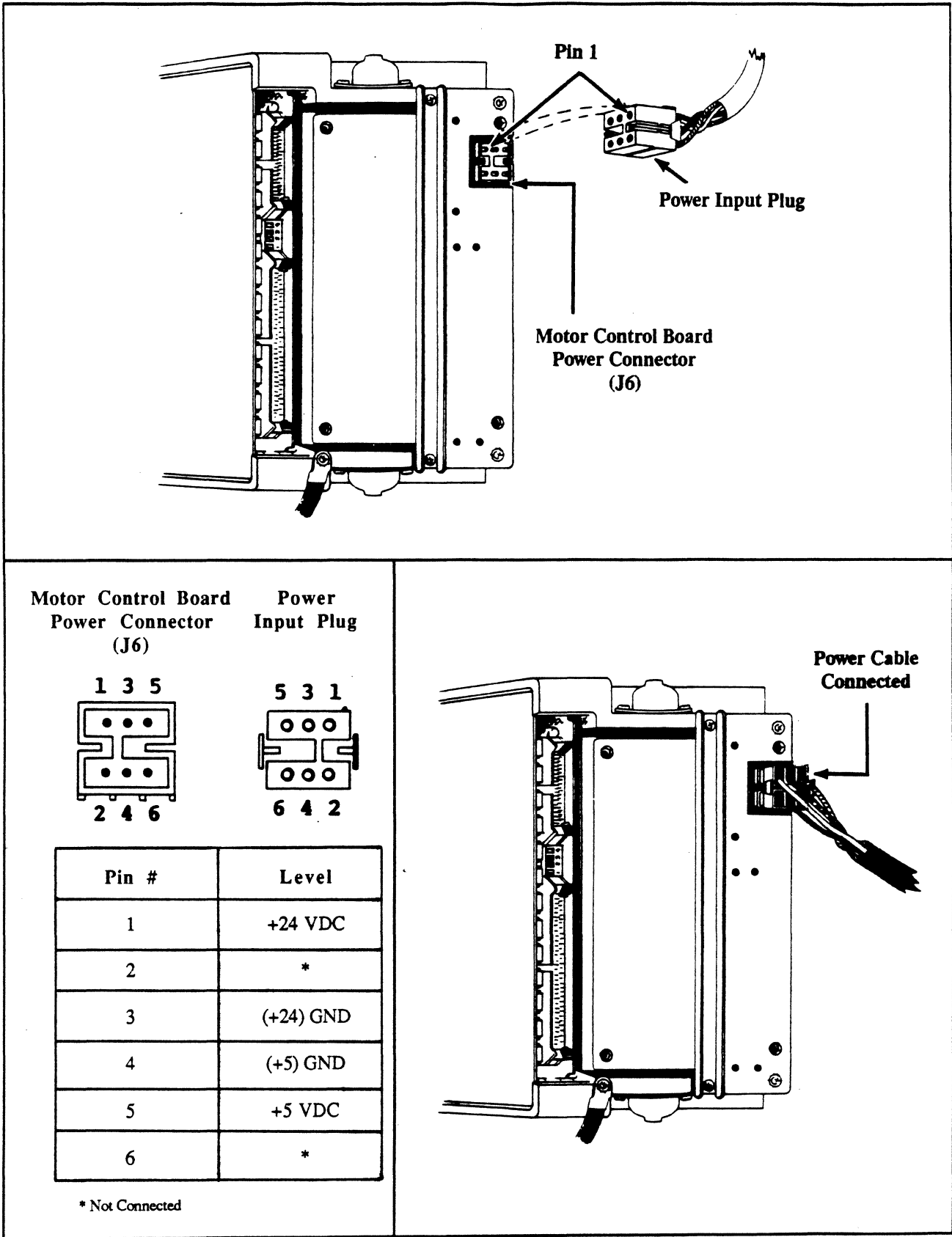


Figure 8
Power Connection

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SMD Terminator Board Installation

An SMD Terminator Board (Option 8950 or equivalent) must be installed between the A Cable and the J1 socket on the SMD Interface Board:

- if only one drive is connected to the controller,
- on each drive in a radial (star) configuration, or
- on the last drive in a daisychain configuration.

CAUTION

The SMD Terminator Board has a grounding wire which must be attached to the drive frame at the same point as the system grounding cable.

See **Figure 9** to install the SMD Board Terminator.

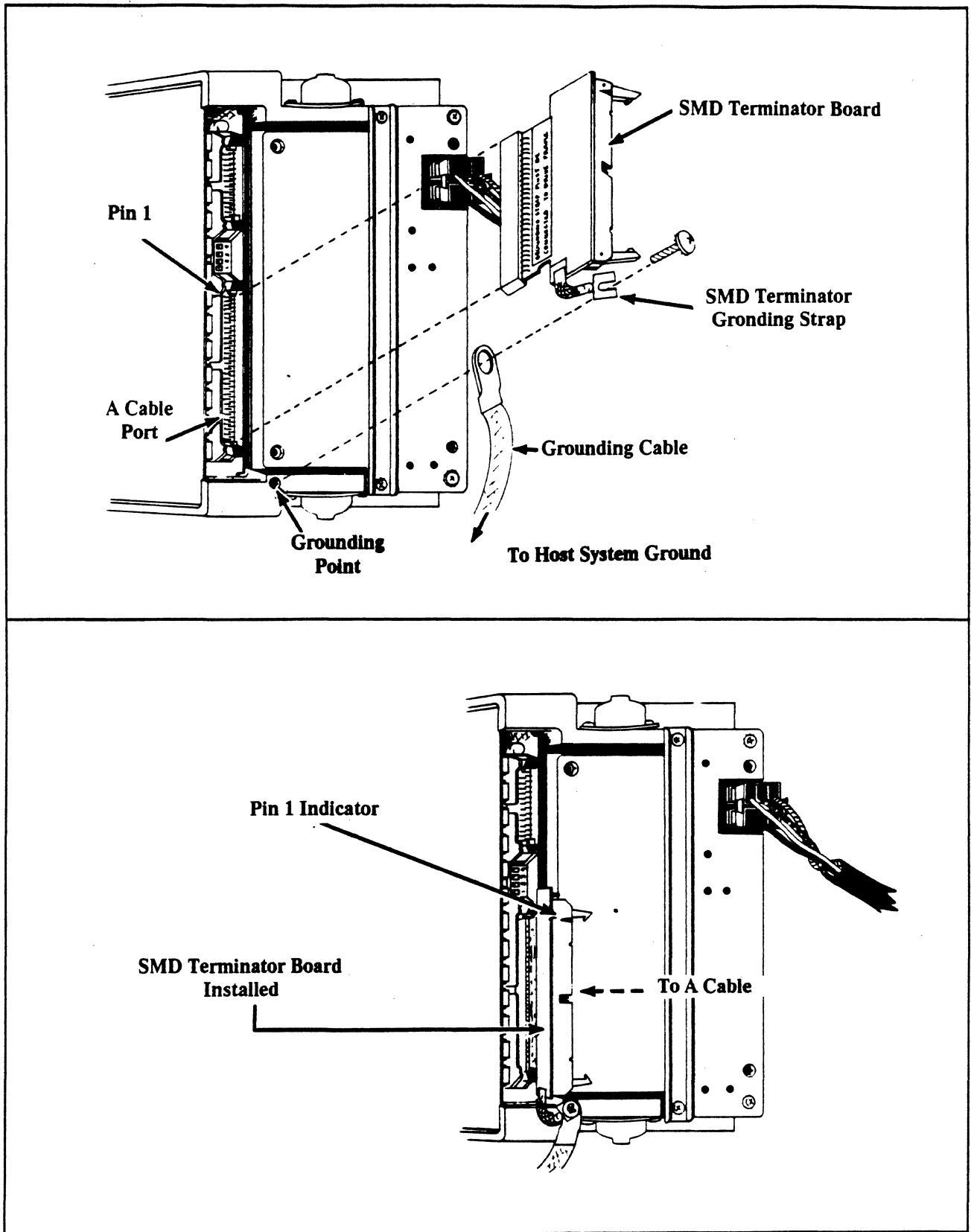


Figure 9
Connecting the SMD Terminator

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A Cable Connection

The A Cable connects to the A Cable Port (J1) on the SMD Interface Board. J1 is a 60 pin connector, 3M-type 3372-1302 or equivalent; it takes a female mating connector 3M-type 3334 or equivalent.

The maximum length of the A Cable:

- for a single drive to the host controller is 100 feet (30 meters).
- for each drive in a star (radial) configuration to the host controller is 100 feet (30 meters).
- in a daisy chain configuration is 100 feet (30 meters) cumulative.

You must install an SMD Terminator Board (Option 8950), between the A Cable and the A Cable Port on the SMD Interface Board.

- if only one drive is connected to the controller,
- on each drive in a radial (star) configuration or
- on the last drive in a daisy chain configuration.

See **Figure 10** to install the A Cable through an SMD Terminator Board.

If multiple drives are connected in a daisy chain then use the Daisychain Backplate (Option 8951). **Figure 11** shows how to install the Daisychain Backplate Option and A Cable for daisychain configurations.

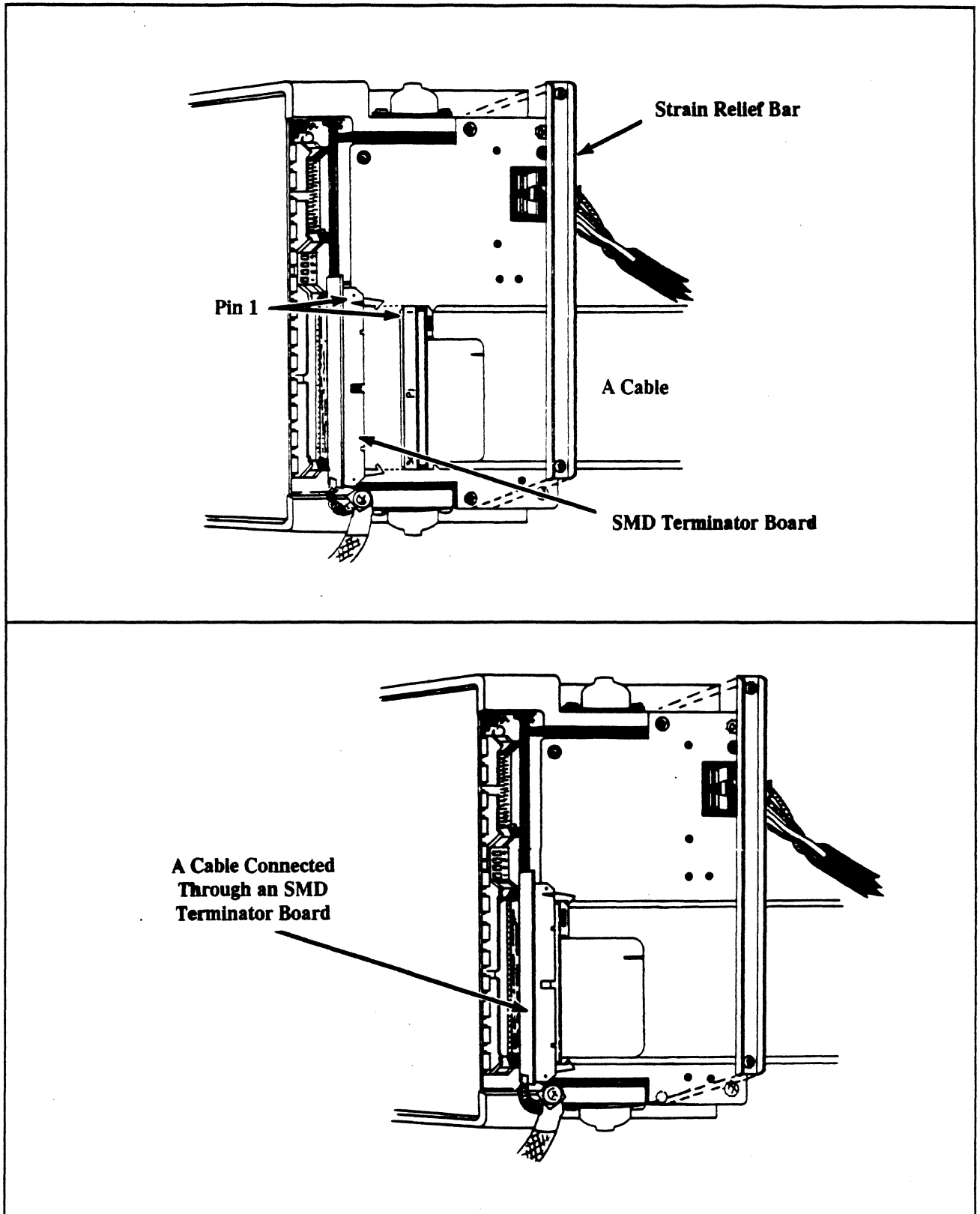
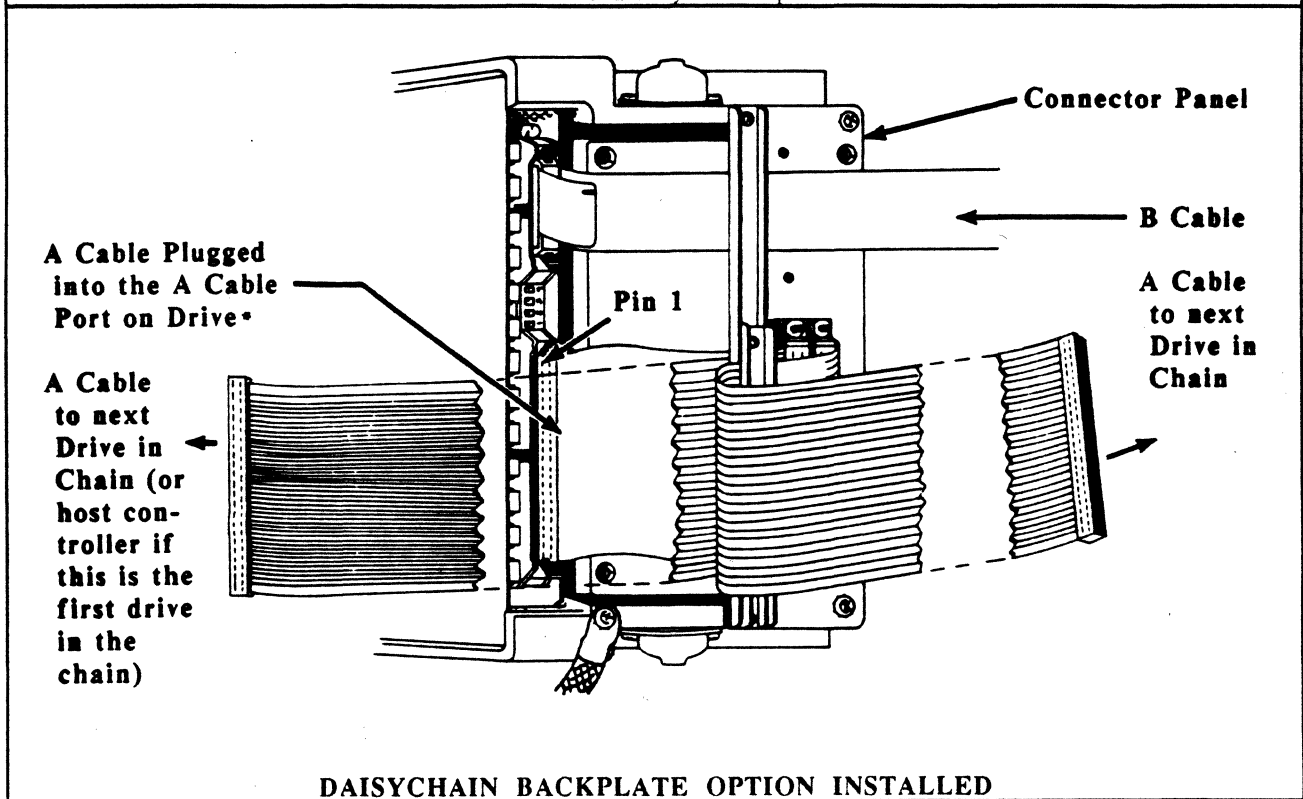
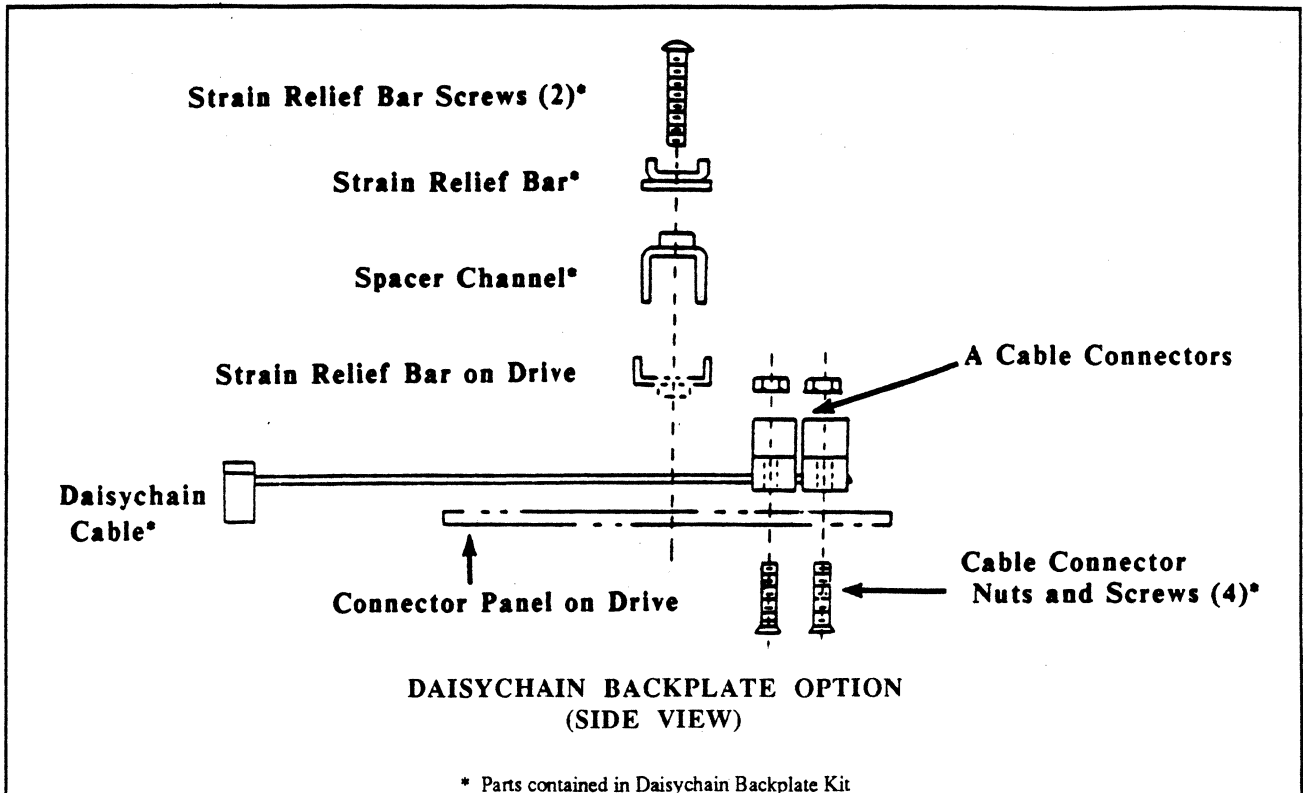


Figure 10
Connecting the A Cable
Through an SMD Terminator



* If the drive is the last drive in the chain then an SMD Terminator also must be installed.

Figure 11
Connecting the SMD A Cable
Through an Daisychain Connector
for Daisy Chaining

B Cable Connection (SMD Interface Read/Write Cable) Connection

The B Cable connects to the B Cable Port (J2) on the SMD Interface Board. J2 is a 26 pin connector, 3M part number 3429-1302 or equivalent; it takes a female mating connector 3M-type 3399 or equivalent.

All drives in any configuration directly connect to the SMD controller by a separate B Cable. See **Figure 12**.

The maximum length of each B Cable is 50 feet (15 meters).

B Cable assemblies are available in lengths of 2, 4, 6, 10, 20, 30, 40, or 50 feet. Order Option 8981-XX (XX specifies the cable length).

After the A and B cables are connected, refasten the strain relief bar as shown in **Figure 12**.

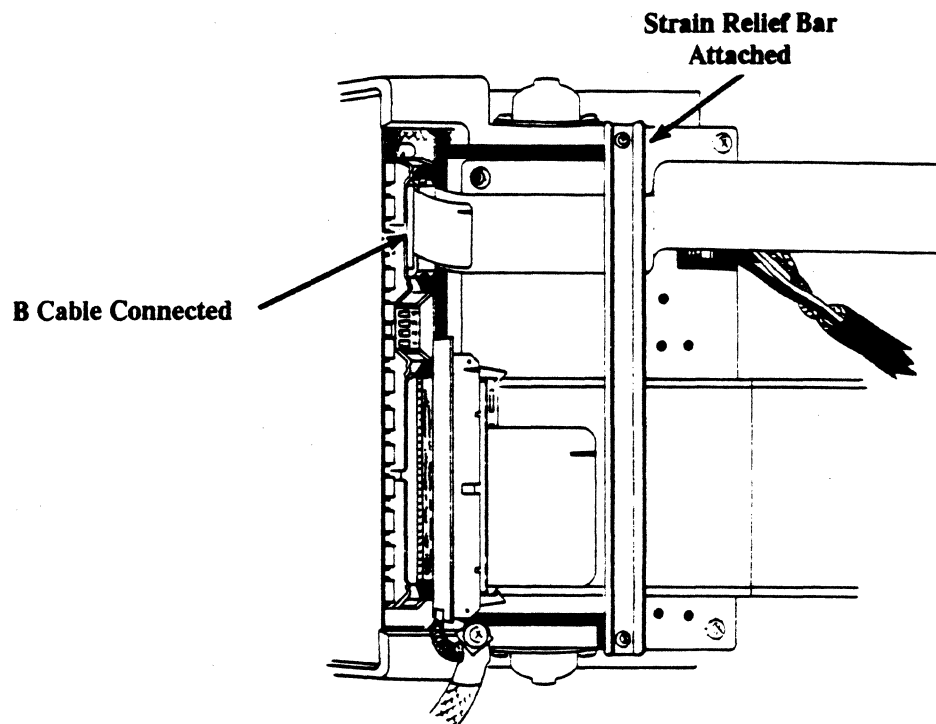
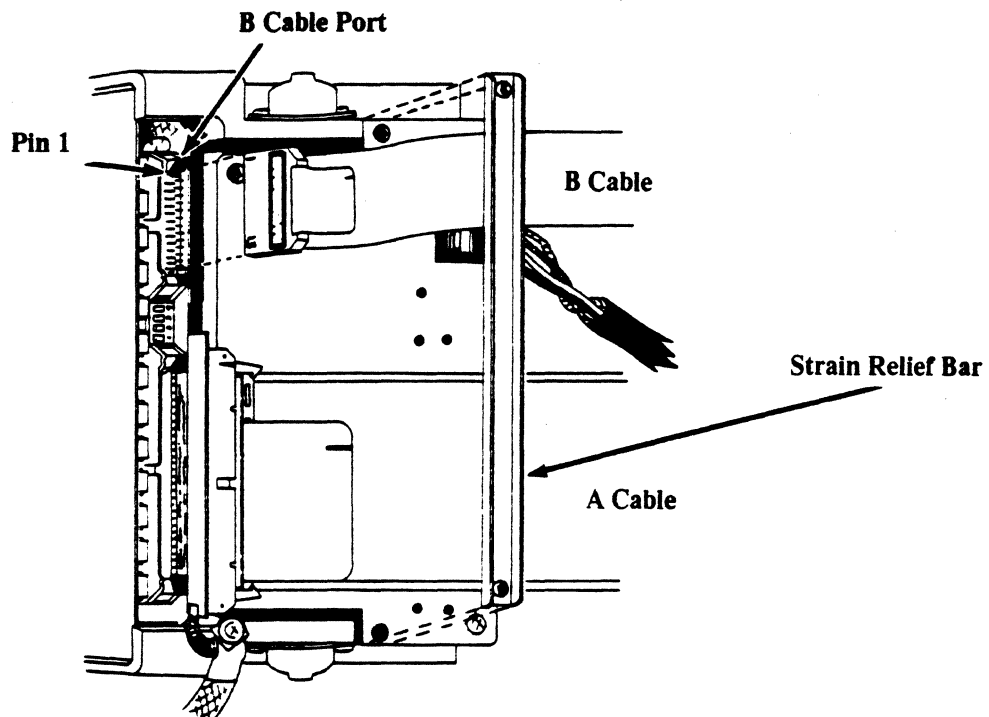


Figure 12
Connecting the B Cable

MOUNTING

The Mercury Disk Drive can be mounted in the user's equipment in any orientation without affecting its performance.

You must mount the drive in the host cabinet by the four factory-installed shock mounts on its frame. Ensure that the disk drive is mechanically supported only by these shock mounts.

The shock mounts should be attached to stand-offs in the host cabinet. See **Figure 13** for critical dimensions in designing host-cabinet stand-offs.

NOTE

The stand-offs must be tapered as shown to allow for full protection against radial shock. The 8-32 mounting screw insertion length must not exceed the shock mount bushing to allow for full protection against axial shock.

A Snubber Kit (Option 8960) increases the non-operating shock tolerance of the drive to 30 G's. The kit includes a bushing that fits inside the standard shock mount and a frame which mounts over the shock mount. Adding the Snubber Kit Option does not affect any mounting dimensions in **Figure 14**.

The drive should be mounted with at least a 0.5-inch clearance all around, and at least 1.0-inch from an adjacent drive to ensure proper airflow and allow for shock/vibration excursion.

Maximum ambient temperature for operating conditions is 45°C. Sufficient airflow should be provided to keep the HDA as measured in the center of the cover below 55°C.

It also is recommended that you mount the drive so it is easy to:

- install and remove the drive
- access the power, A, B and grounding cables
- reach the User Variable Switches

See **Figure 14** for the Mercury Disk Drive dimensions.

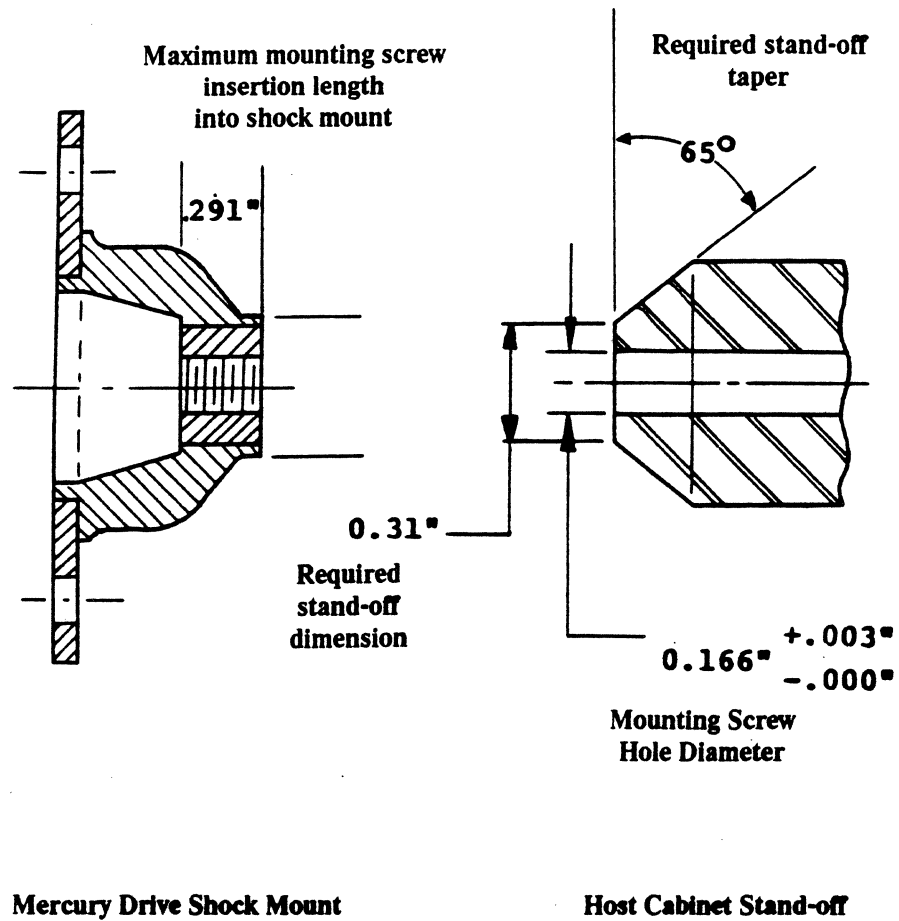


Figure 13
Shock Mount and
Host Cabinet Stand-Off Dimensions

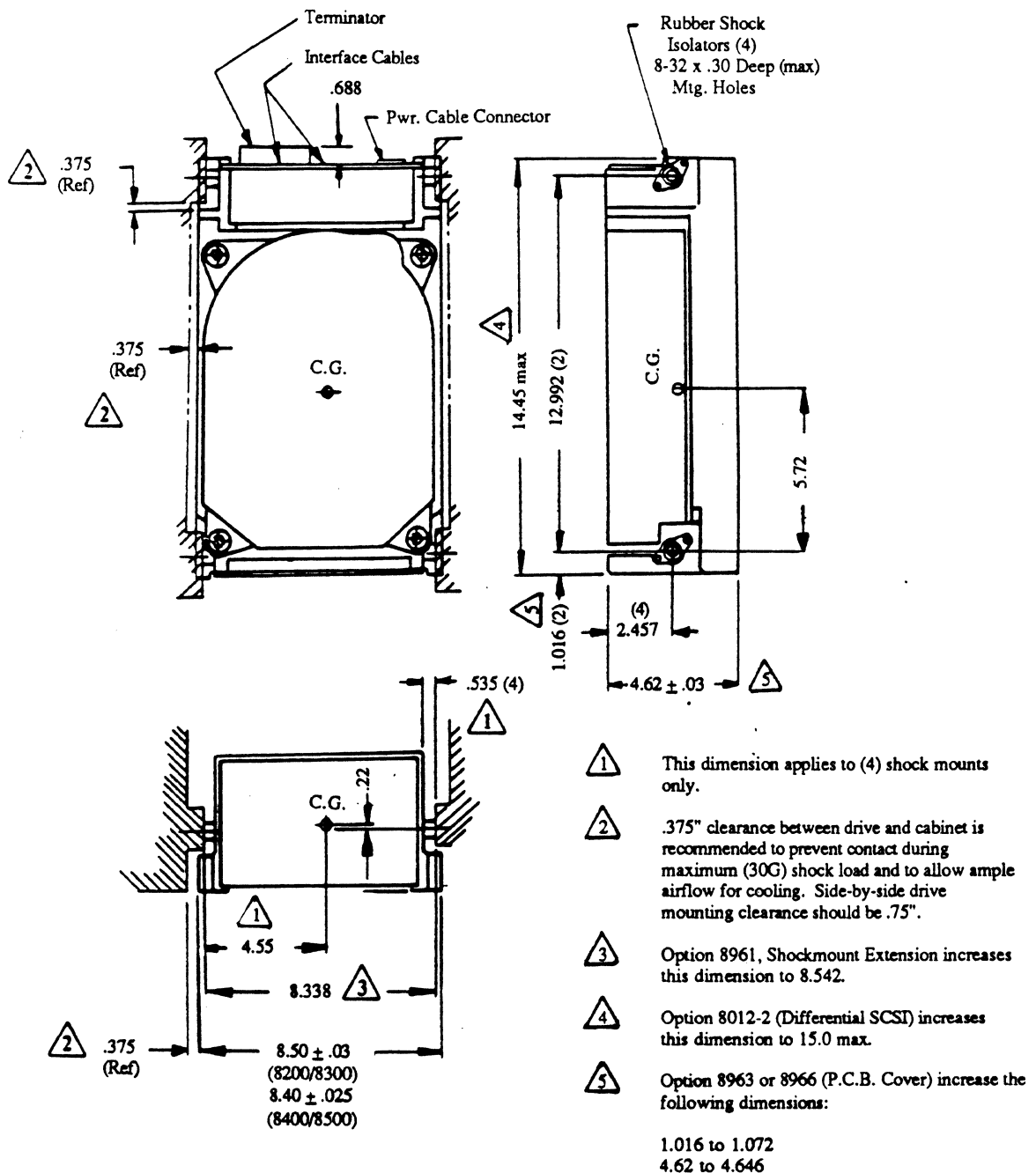


Figure 14
Mercury Disk Drive
Mounting Dimensions

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CHECKOUT

Media Defect Map

The Mercury Disk Drive is factory formatted with a Media Defect Map written in all sectors of cylinders 0, 822 and max cylinder on heads 0 and 1.

A Media Defect Map printout also is included with each drive.

NOTE

If you want to use the recorded media defect map information, then recover the media defect map before writing to the tracks on which it is located.

See the *MSD Mercury Product Specifications* for more details on the Media Defect Maps.

Start Up

From power on until the UNIT READY signal is high takes approximately 20 seconds. During this time the drive performs self tests. It also performs a calibration seek which normally produces a "ratcheting" sound. If the drive is configured in the Remote Mode (see User Variable Switch Settings section) be sure the host controller issues a PICK command to allow disk power-up.

Motor Control LED

The red Motor Control LED on the Motor Control Board (see **Figure 15**) will stay lit under a fault condition in which the drive motor cannot or will not start. Check the Status LEDs (described in the Status LEDs paragraph) to define the problem if the Motor Control LED is lit.

Drive Fault LED

The SMD Interface Board has one red LED used to indicate a Drive Fault or Interface Fault condition. See **Figure 16** for the location of the Drive Fault Indicator. Check the Status LEDs (described in the next paragraph) to define the problem if the Drive Fault LED is lit.

Status LEDs

The CEA Board runs diagnostics on the drive's major circuits at initialization, reset and during operation. Results of the diagnostics are displayed by five Status LEDs on the CEA Board. **Figure 16** shows the location of the Status LEDs which are labeled D1 to D5; **Table 6** defines the error messages.

Clearing a Fault

The Fault status signal is output active high to the controller by the disk drive when a fault is detected.

The Drive Fault LED on the SMD Interface Board remains lit until the fault condition is cleared. To clear a fault condition:

- the controller should send a Fault Clear Bit signal (TAG 3 operation Bit 4) to the drive,
- if the controller does not provide a Fault Clear Bit Signal then Reset the drive to clear a fault.

If the fault will not clear, then call MSD Customer Service.

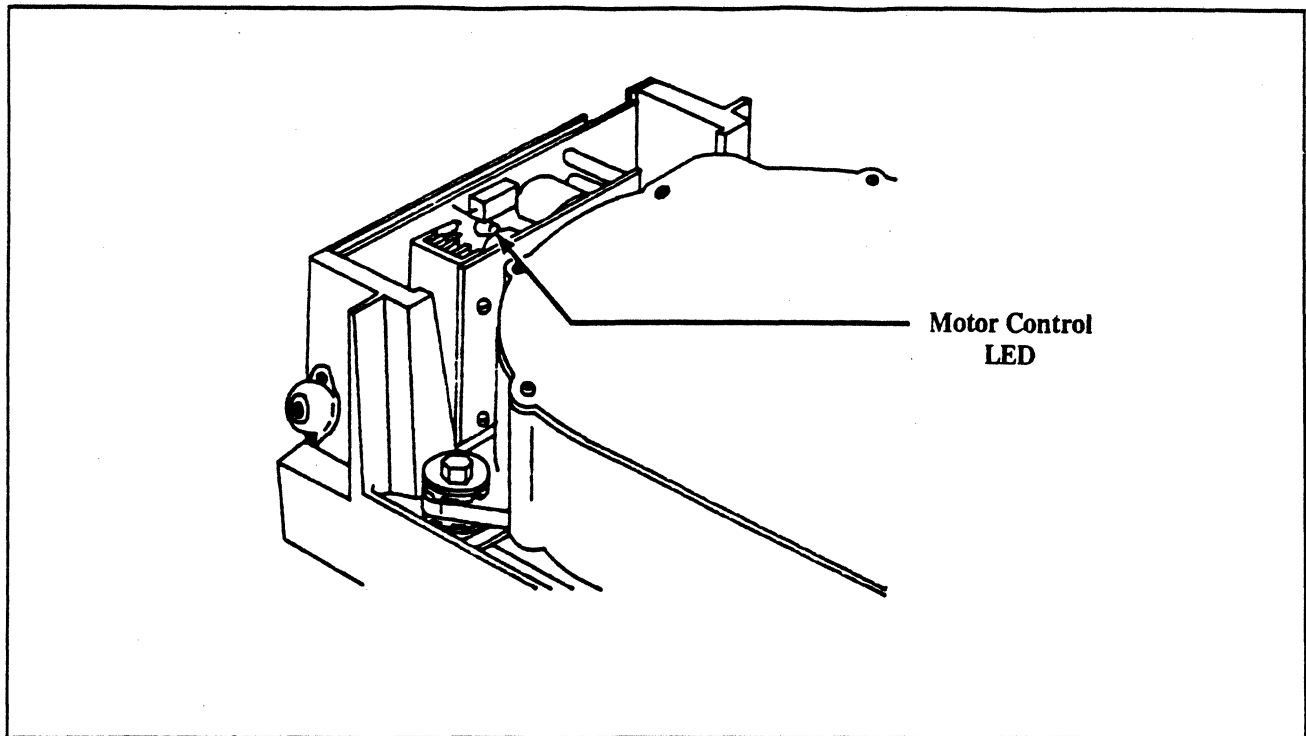


Figure 15
Motor Control LED Location

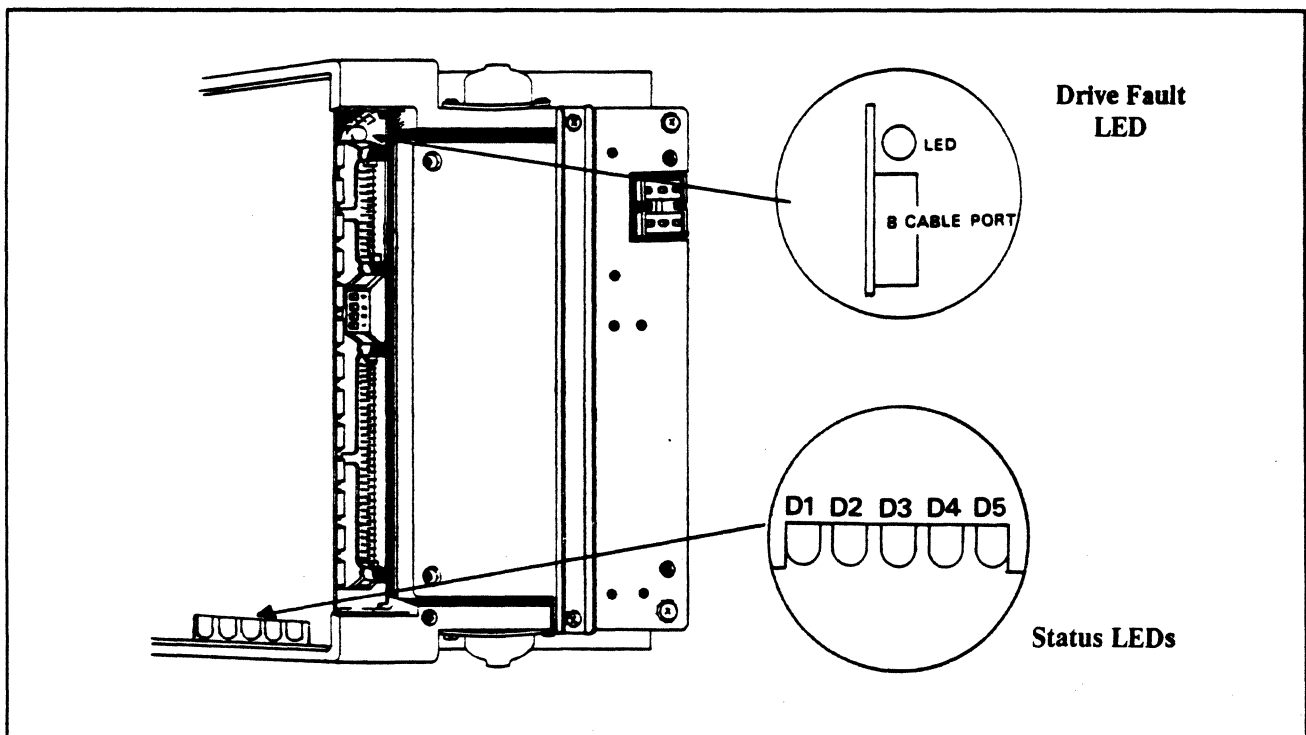


Figure 16
Drive Fault LED and
Status LEDs Location

Table 6
CEA Board Status LED
Display Definitions

STATUS LED					STATUS CONDITIONS		
GRN D5	RED D4	RED D3	RED D2	RED D1	HEX CODE	STATUS	STATUS DESCRIPTION
0	0	0	0	0	00	Initializing	Initialization not yet complete
0	0	0	0	L	01	* ROM Error	Check sum error
0	0	0	L	0	02	* RAM Error	Ram data error
0	0	0	L	L	03	* Power Error	Power monitor fault
0	0	L	0	0	04	Read Channel Error	Unable to read data from disk
0	0	L	0	L	05	* M/C - CEA Cable Error	Tach pulses not occurring
0	0	L	L	0	06	* Motor - M/C Error	Cannot control spindle speed
0	0	L	L	L	07	Clock Gener. Error	Servo headers not occurring
0	L	0	0	0	08	Head Surface Error	Bad head or disk surface
0	L	0	0	L	09	Track Index Error	Cannot find or hold INDEX on track
0	L	0	L	0	0A	* Surface Index Error	Cannot find INDEX on an entire surface during initialization
0	L	0	L	L	0B	* Command Port Error	Unable to clear RTZ and seek commands from host
0	L	L	0	0	0C	Head Stall	Unable to move heads while performing a seek
0	L	L	0	L	0D	Position Servo Error	Head drift off at least one track
0	L	L	L	0	0E	Write Unsafe Error	Head open or shorted, no data transition
0	L	L	L	L	0F	Pick Not Asserted	Pick signal not asserted
L	0	0	0	0	10	Drive Ready with Unit Select	Drive ready and selected
L	0	0	0	L	11	Drive Ready w/o Unit Select	Drive ready, awaiting selection

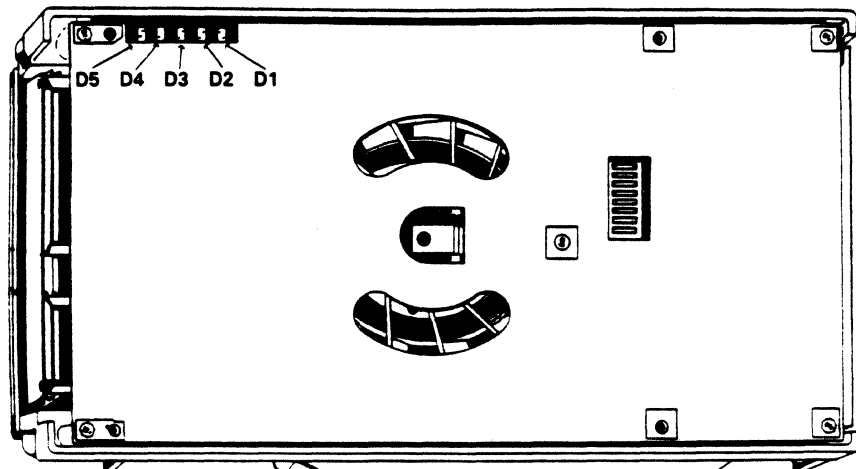
Table 6 (Cont'd)
CEA Board Status LED
Display Definitions

STATUS LED					STATUS CONDITIONS		
GRN D5	RED D4	RED D3	RED D2	RED D1	HEX CODE	STATUS	STATUS DESCRIPTION
L	0	0	L	0	12	Write Inhibit	Unable to read enough servo headers in one rev.
L	0	0	L	L	13	Write Protect Fault	Attempted to write to write-protected disk
L	0	L	0	0	14	Interface Fault	I/F fault set, not attributed to drive
L	0	L	0	L	15	Seek Timeout	Unable to complete seek within allotted time
L	0	L	L	0	16	Servo Header Error	Servo header out of position
L	0	L	L	L	17	* Processor Bus Failure	Unexpected processor restart instruction
L	L	0	0	0	18	Off-track Error	Head off centerline
L	L	0	0	L	19	Open Interface Cable	"A" Cable not properly connected
L	L	0	L	0	1A	Sector Size Error	Unable to determine sector size
L	L	0	L	L	1B	Clock Window Error	Unable to determine servo header position
L	L	L	0	0	1C		
L	L	L	0	L	1D		
L	L	L	L	0	1E		
L	L	L	L	L	1F	* Processor Error	Processor unable to execute instruction

L - Light On

0 - Light Off

* - Requires reset to clear



ACCESSING THE CEA AND SMD INTERFACE BOARDS

The Mercury Disk Drive usually does not require any disassembly during installation.

If, however, it is necessary to access the internal electronics of the CEA or SMD Interface Boards, then follow these instructions and refer the **Figure 17** and **17A**.

- (a) Remove the five Phillips-head screws which fasten the CEA board to the drive frame.
- (b) Carefully slide the CEA board slightly to the left or right to clear the spindle motor ground strap. When the CEA Board is free, slowly pull away the CEA Board from the drive frame just until you can gain access to the cable connectors on the CEA Board.
- (c) Carefully disconnect the heat sink ribbon cable connected to socket J4 on the CEA Board as shown in **Figure 17**.
- (d) Fold down the CEA Board next to the drive frame as shown in **Figure 17A**.
- (e) Remove the four Phillips-head screws which fasten the SMD Interface Board to the CEA Board.
- (f) Carefully fold out the SMD Interface Board from the CEA Board -- it is not necessary to disconnect the ribbon cable from the SMD Interface Board to the CEA Board.
- (g) Reassemble the drive by reversing these procedures.

CEA FIRMWARE UPGRADE

Continued improvements in the disk drive are often implemented via CEA firmware upgrades. If it is necessary or desired to implement new CEA firmware, the following procedure should be used.

- (a) Access the CEA Board via the procedure above.
- (b) Locate the CEA firmware PROM, shown in **Figure 17B**.
- (c) Remove the existing CEA firmware PROM using a PROM puller tool.
- (d) Carefully insert the new CEA firmware PROM, noting the firmware revision level.
- (e) Reassemble the drive by reversing the procedures above.

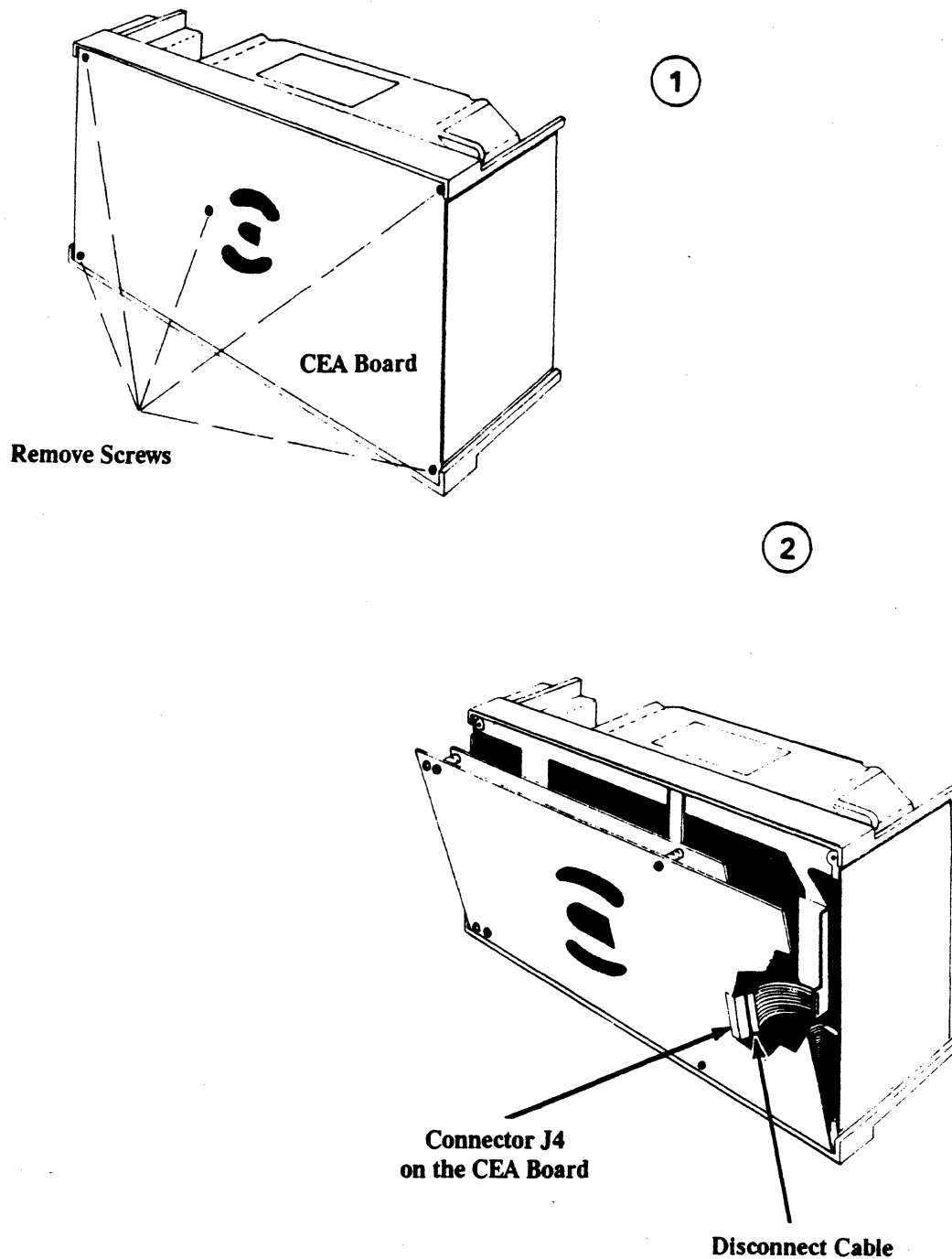


Figure 17
Accessing the CEA and SMD Interface Boards

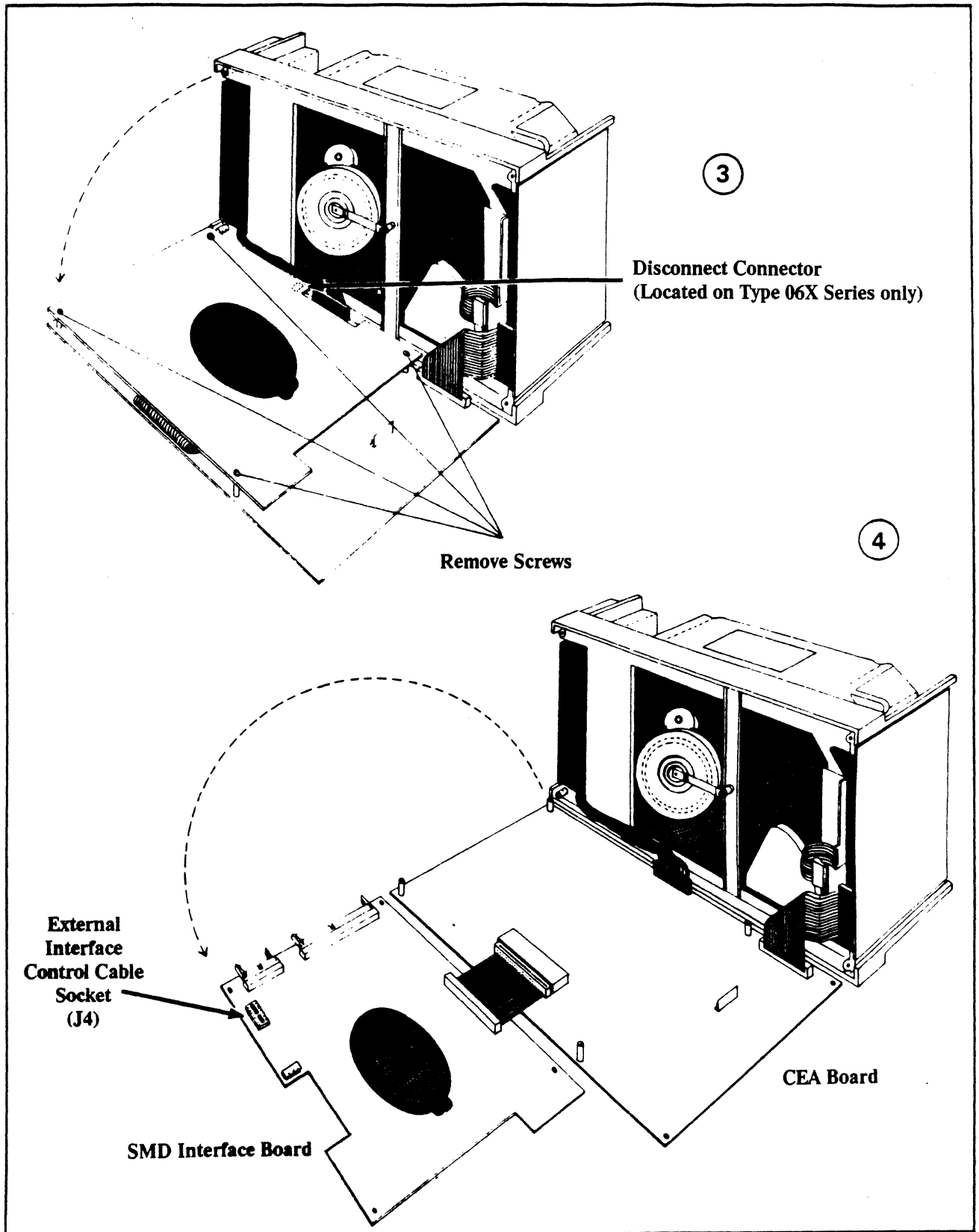


Figure 17A
Accessing the CEA and SMD Interface Boards

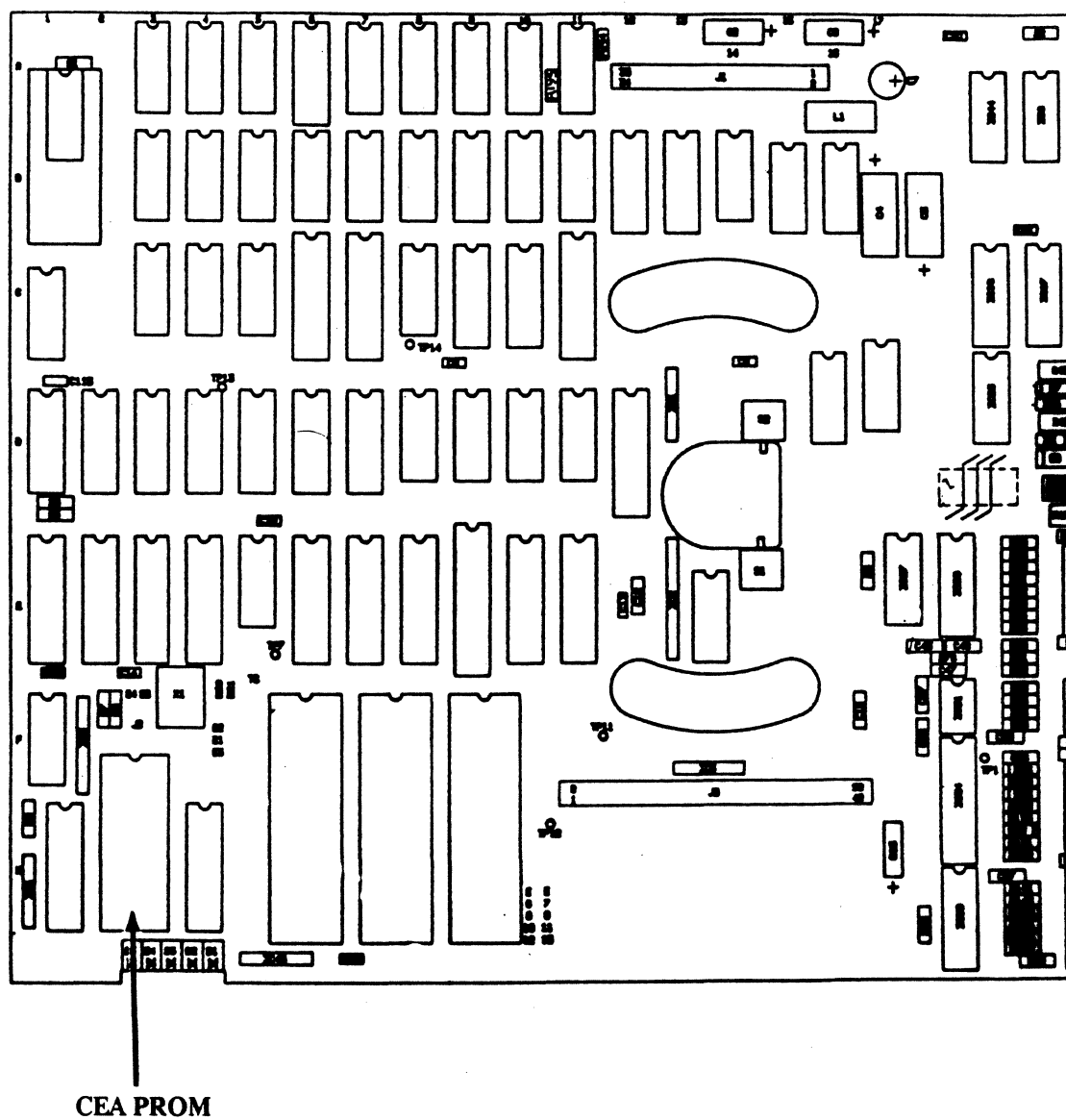


Figure 17B
CEA Firmware Upgrade

EXTERNAL INTERFACE CONTROL CABLE SOCKET

The SMD Interface Board has an External Interface Control Cable Socket (J4) which can be used to route control lines and status signals to a remote location.

Follow these instructions and refer to **Figures 17, 17A and 18** to install an External Interface Control Cable.

- (a) Follow the instructions in the previous section of this manual to access J4 on the SMD Interface Board. See **Figure 17A** for the location of socket J4 on the SMD Interface Board.
- (b) Use a flat, low-profile, 16-pin DIP plug (3M part number 3406-0000 or equivalent) and a 16 conductor flat ribbon cable to connect to the socket. Route the cable as shown in **Figure 18**.
- (c) Be sure to effectively isolate the External Interface Control Cable and switches to avoid electrostatic discharge (ESD).

Figures 19 and 20 show the External Interface Control and Display Line Circuits.

Figure 21 shows the interface signal lines and the signal pin assignments of External Interface Connector J4.

Tables 7 and 8 describe the External Control and Remote Status Display Lines.

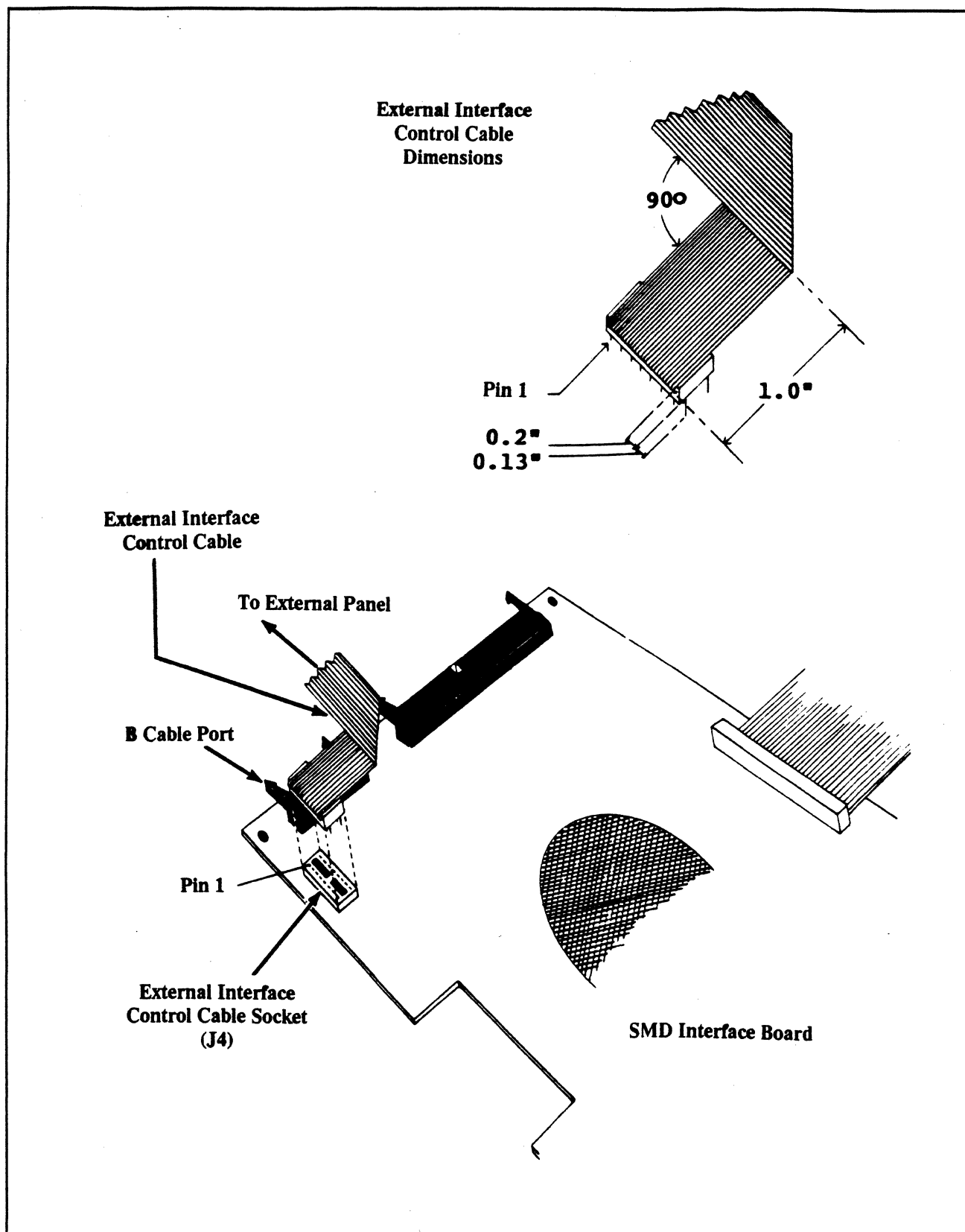


Figure 18
Installing an External Interface Control Cable

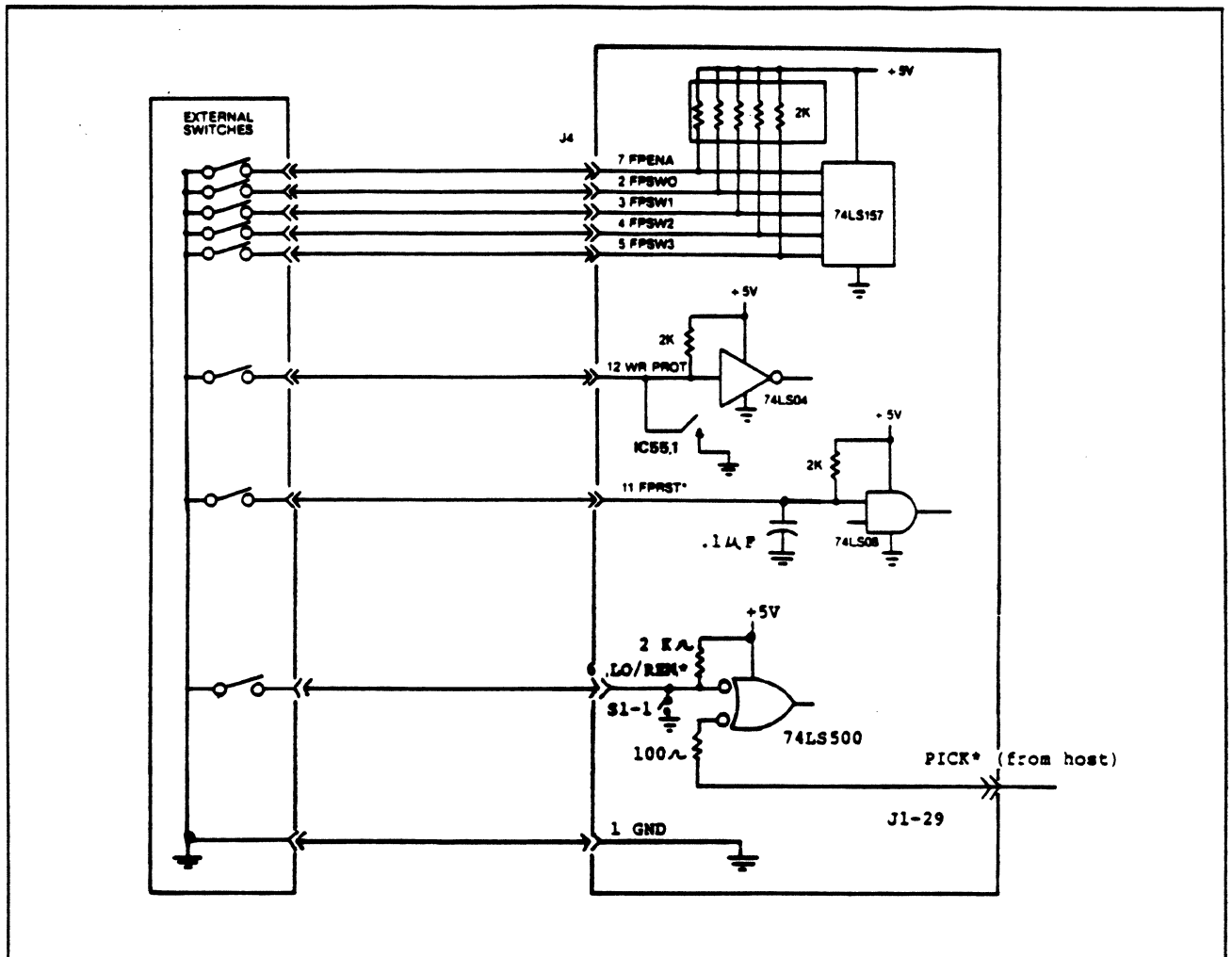


Figure 19 Control Line Circuits

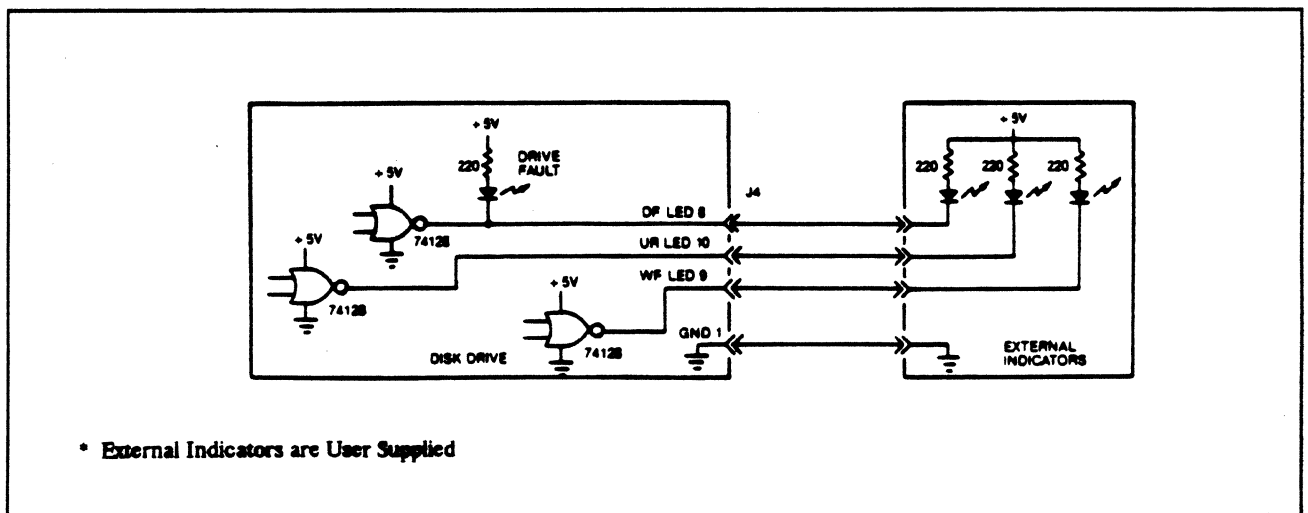


Figure 20
'Status Display Line Circuits

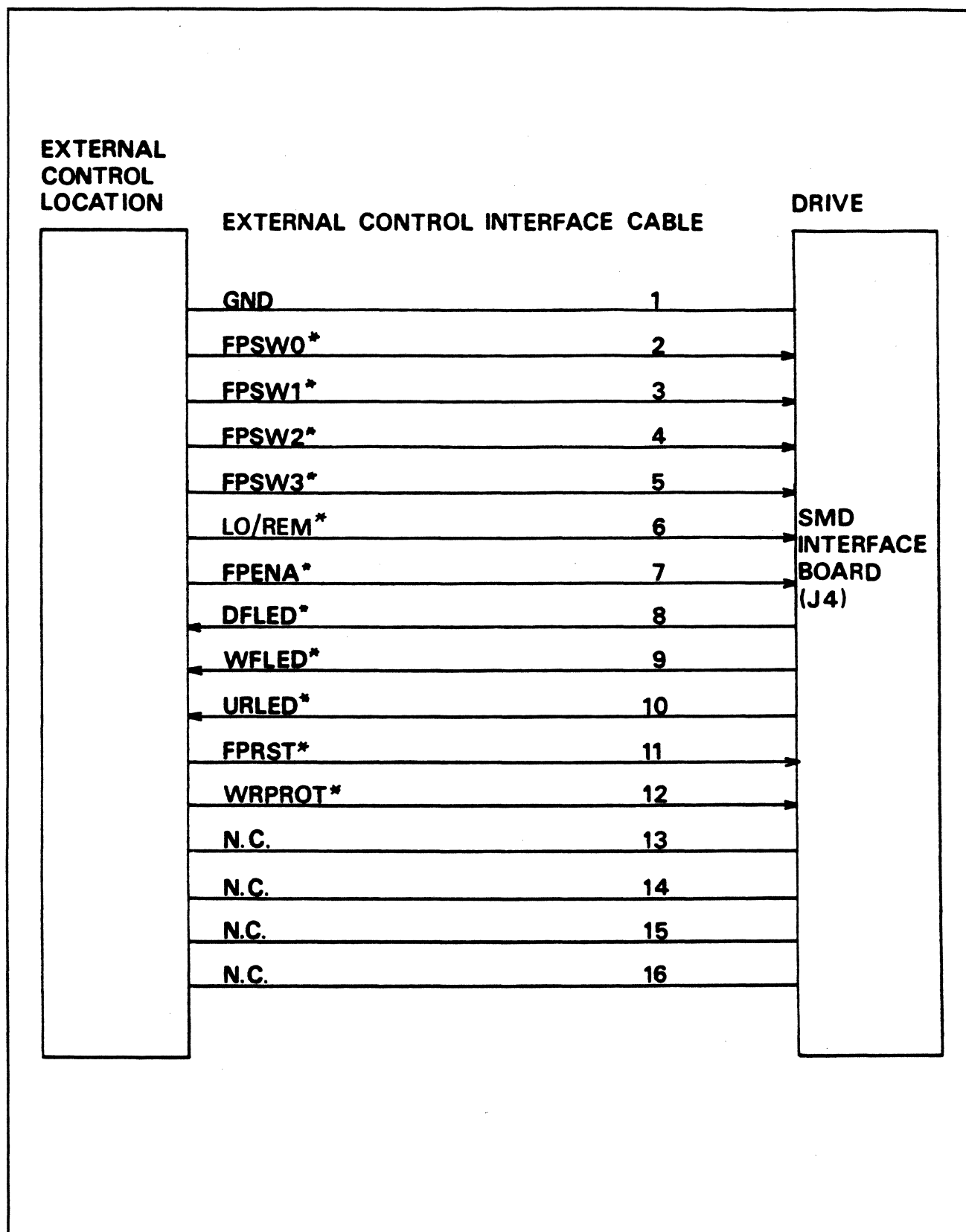


Figure 21
External Interface Control Cable

The External Control Line signals are described in Table 7. In the following descriptions note:

- for switch panel designs ON is grounded and OFF is open. See Figure 19.
- for TTL designs, use active low convention; ON = $0.8 V_{IL} (\text{max})$, OFF = $2.4 V_{IH} (\text{min})$.

Table 7
External Control Lines

MNEMONIC	SIGNAL NAME	FUNCTION
FPENA*	External Control Enable	If this signal is ON then the address set on the remote signal lines (FPSW0* to FPSW3*) is used; if it is OFF, then the address set at switch block IC55 is used.
FPSW0* FPSW1* FPSW2* FPSW3*	Unit Select External Control	The four drive address select lines. Drive address is binary encoded. FPSW3 is Most Significant Bit. ON=1, OFF=0. If the External Control Enable Switch (FPENA*) is ON, the address set on the remote signal lines (FPSW0* to FPSW3*) is used. If it is OFF then the address set at switch block IC55 on the CEA Board (SW3 to SW6) is used.
WRPROT*	Write Protect External Control	Assertion safeguards all data on the disk by inhibiting the write function. If either this switch or the Write Protect Switch (SW1) at switch block IC55 on the SMD Interface Board is ON then the drive is write protected. Both of these switches must be OFF to write to the disk.
LO/REM*	Local/Remote	When active low, activates the local mode allowing disk power-up without host intervention. Otherwise, the remote mode exists which requires the host to activate PICK before power-up can occur. If "LOCAL" is selected on either signal REM/LO or the Remote/Local switch on the SMD Board, the local mode is activated. (See Table 4).
FPRST*	Drive Reset External Control	Causes CEA microprocessor reset when ON.

* Active Low

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Remote Status Display Lines

Remote Status Display Lines may be connected to remote LEDs to display status information. When a remote status display line is set low, the LED indicator lights to indicate a particular condition exists. When a remote status display line is high, the LED remains off to indicate the condition does not exist. **Table 8** describes the signals.

The remote LEDs require a +5 VDC source and a series 220 ohm resistor as shown in **Figure 20**.

Table 8
Remote Status Display Lines

MNEMONIC	SIGNAL NAME	FUNCTION
URLED*	Unit Ready External Signal	When set low by the drive, indicates that the drive is operational.
DFLED*	Drive Fault External Signal	When set low by the drive, indicates an SMD Interface Drive Fault.
WFLED*	Write Fault External Signal	When set low by the drive a write fault has occurred.

* Active Low

EVALUATION UNITS

Some evaluation unit drives are shipped with special rubber feet (Evaluation Feet) so you can run the drives unmounted for testing. See **Figure 22** for locations of the Evaluation Feet.

CAUTION

Do not operate the Drive with the CEA Board air intake holes obstructed.

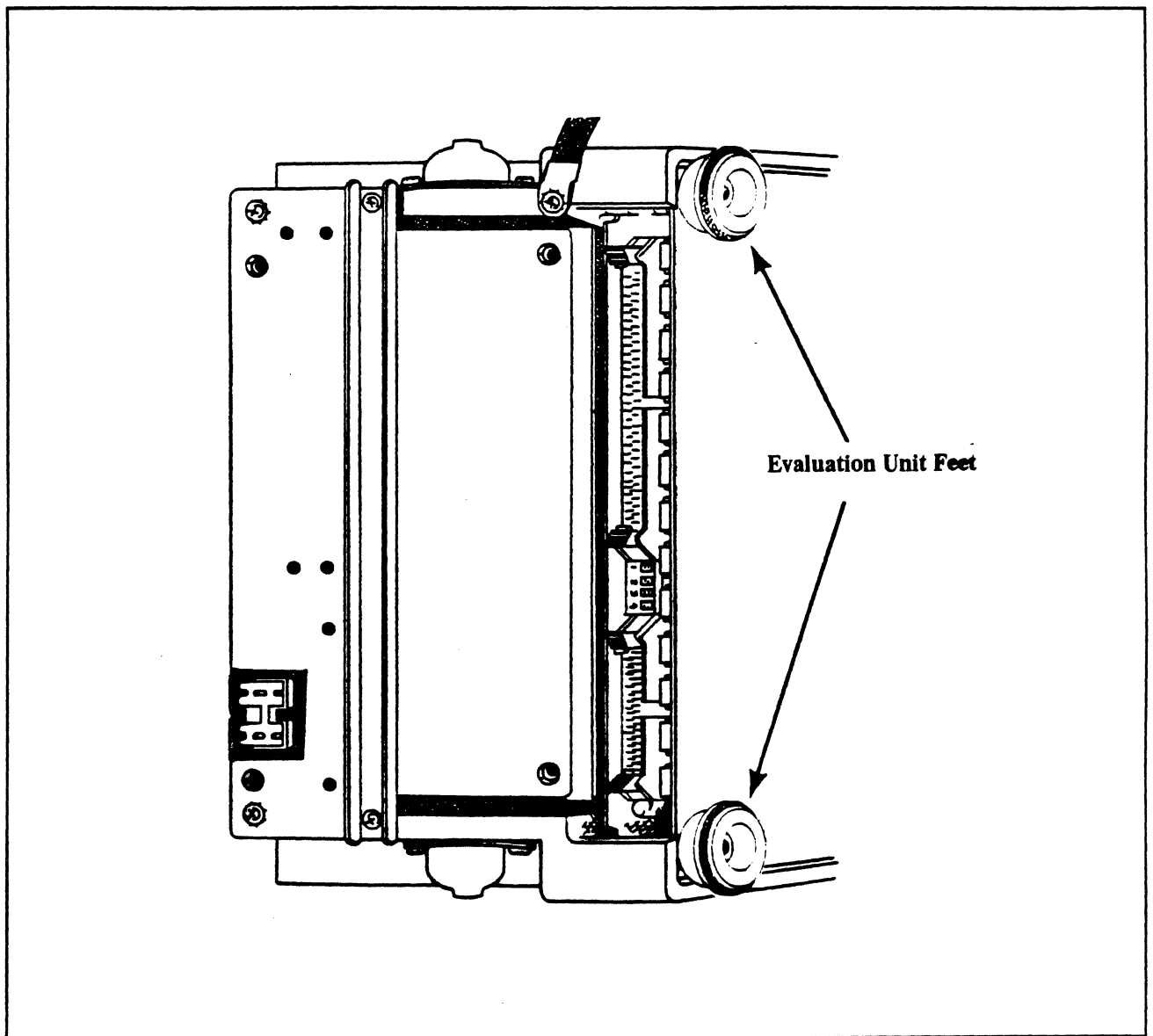


Figure 22
Installing Evaluation Unit
Rubber Feet

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Evaluation Kits

Two Optional Evaluation Kits are available for the Mercury 8" Winchester Disk Drive.

- Option 8970: Evaluation Kit without power supply.
- Option 8971: Evaluation Kit with power supply (110 VAC)

Both kits contain:

- One SMD Interface Control Cable (A Cable) with connectors
- One SMD Interface Read/Write Cable (B Cable) with connectors
- One Grounding cable with terminals

Kits without power supplies also contain one power supply connector cable. This cable has a mating connector for the DC input socket at J6 on the Motor Control board and labeled leads with spade connectors for attachment to +5 and +24 VDC power supplies.

Kits with power supplies include a +5/+24 VDC source with the DC power cable attached. The cable has a mating connector for the DC input socket at J6 on the Motor Control Board.